

E-Banking Service Quality and Customer Loyalty: Changing Dynamics of Public, Private and Foreign Bank Consumers in India

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Abstract

Purpose: The purpose of this research paper is to study how the e-banking consumers' perceive the e-banking services of public, private and foreign sector banks operating in the Indian banking sector and also making a deeper introspection of service quality in all three types of banks to understand whether there is a significant difference in service quality on the basis of nature of banks.

Design/methodology/approach: The study uses self-structured questionnaire duly validated and tested for reliability in this research. Factor analysis, Regression analysis and ANOVA have been used in the paper. ANOVA has been used to find out whether there is a significant difference in e-banking service quality in public, private and foreign banks. It makes an empirical analysis of factors influencing e-banking service quality by using Factor Analysis and then a relation between service quality and customer loyalty has been found by using Regression analysis.

Findings: Findings of the research paper are that improvement in service quality would induce higher customer loyalty. The initial part of paper measures the e-banking services through Debit, Credit, Internet, Telephone, Mobile, Depository, Investment and Multicity facilities in three types of banks. The results of ANOVA highlight that there is a significant difference in these facilities of public, private and foreign banks. Factor analysis results help to reduce 12 features of service quality into four factors. These four factors explain 84.014 per cent of variation. These four factors are: Website interface, Security, Convenience and Access.

Originality: The present research focuses on e-banking service quality and customer loyalty covering changing dynamics of public, private and foreign banks' consumers in India, which has not been covered in earlier studies. The service quality features are for e-banking only and are different from the earlier studies on banking in general. On the basis of regression, the study identifies the factors to be either improved or enhanced and the banks can accordingly focus on the areas they want to improve/enhance for increasing customer loyalty.

Keywords: Service quality, E-banking, Customer loyalty, India.

Paper Type: Research Paper

Introduction

In this era of stiff competition, public, private and foreign sector banks in India have realized the importance of achieving high levels of customer satisfaction by providing service quality of world class. Banks operating in these three sectors are consequently putting a lot of pressure due to increase in competition. Various strategies are formulated to retain the customers and the key of it is to increase the service quality level. Service quality is particularly essential in the banking services context because it provides high level of customer satisfaction and hence it becomes a key to competitive advantage as well as it leads to customer retention. In addition, service quality has a significant impact on a bank's success and performance (Mouawad and Kleiner 1996). Nowadays, service quality has received added attention because of its relationship with costs, financial performance, customer satisfaction and customer retention. Due to the dawn of e-banking, quality of service has been enhanced as compared to conventional banking services. Internet banking, Mobile banking, automated teller machine, electronic fund transfer has totally altered the way of providing services by the banks. As customers are now technology savvy, therefore, it becomes indispensable to consider the use of technology to react to their continuous needs. The penetration of ATMs in India increased in 2012-13 with the total number of ATMs crossing 1,00,000, clocking a double digit growth during the year. This growth was driven primarily by private sector banks with their share in total ATMs picking up rapidly to about 38 per cent. So far, debit cards have been a more popular mode of electronic money than credit cards in India (RBI reports, 2013). While public sector banks have been frontrunners in issuing debit cards, new private sector banks continue to lead in the number of credit cards issued. As the service quality improves, the probability of customer loyalty increases. Bank automation and electronic banking is invading at a rapid pace and private sector and foreign sector banks have an advantage of adopting it at a faster pace than the public sector banks and it also has to capture the pace.

E-banking is an improvement over traditional banking system because it has reduced the cost of transaction processing and thereby improving the payment efficiency and also improving the banker-customer relationship. The relationship between e-banking and service quality can be studied with the level of customer satisfaction and loyalty. E-banking plays a pivotal role in providing satisfaction to the customers. Banks should discover innovative ways of making electronic services more accessible and by allowing the customer to verify the accuracy of the e-banking transactions.

Most importantly, profitable e-banking requires a strong focus not only on the acquisition of new customers but also on the retention of existing customers, since the acquisition costs in online banking exceed that of traditional off line business by 20-40 % (Reibstein, 2002; Reichheld & Schefter, 2000). Consequently, establishing long-term customer relationships is a prerequisite for generating positive customer value on the internet. During the last few years, these findings have led to the development of simple banking web sites into wide-ranging e-banking portals offering a great variety of services. In order to enhance customer loyalty, portals are required to put a strong emphasis on their customers' quality demands, which are steadily increasing over time (Jun & Cai, 2001). Most importantly, satisfaction has been recognized as a key path to long-term profitability. These findings hold especially true for the financial services, where reducing the defection rate by 5 per cent can boost profits up to 80 per cent (Reichheld & Sasser, 1990).

The study for the Indian banking sector for the period 2005-06 to 2009-10 too suggested efficiency gains resulting from technological innovations and investment in IT (Rajput and Gupta, 2011). Globally, there has been a rapid advancement in Information and Communication Technology (ICT) which has reflected in banks' business strategies, customer services and organisational structures among others. Innovative adoption in the form of internet banking, ATMs and mobile applications have created a profound impact on the delivery channels of banking services. Also, a number of innovative developments in retail payments have emerged, which affect the retail payment market by influencing users in their choice of payment instruments and by significantly reshaping the payment processes. Notwithstanding the growth of various electronic modes of payment in India, it still has a long way to go in terms of achieving the high levels of penetration of such modes across the world, particularly in high income countries. The usage of electronic modes of payments/ transfers can help in reducing the costs of operation for banks, the benefit of which can be transferred to customers.

This study aims to explore the difference in the e-banking service quality features of public, private and foreign sector banks. It also covers the relation between customer loyalty and service quality factors in banking sector to help banks to increase customers' satisfaction.

Literature Review

A customer entered in a bank must get maximum satisfaction from the quality of e-banking services offered by them. Service quality has been found as one of the important factor in making a difference in products and services (Balachandher, et.al 2001). Maximizing customer satisfaction through quality customer service has been described as 'the ultimate weapon' by Davidow and Uttal (1989). According to Yang and Fang (2004) Service quality is a significant instrument to measure customer satisfaction. There is a close relationship between customer satisfaction and service quality. Customer satisfaction can be given by providing quality of products and services to customers. For accessing customer satisfaction, SERVQUAL model is used to know the different services provided by banks and customer perceptions about the services. This tool is used to overcome problems with related to customer satisfaction and quality of services offered to customers. As now most banks are offering e-services there is a need to understand difference in services from the point of access, availability and even adaptability. This needs to be identified and empirically verified.

Wong and Sohal (2003) discussed about customer satisfaction as often recognized as the future expectations of banks in terms of its profitability and market share, a satisfied customer always shares his or her experiences to others through word of mouth advertising extensively to increase more new customers to bank. This is possible only when the banks give quality services with ease. On the other hand a dissatisfied customer can lead to extensive loss by means of losing present and prospective customers. It is not only the customer satisfaction, the social relationships with customers is also equally important. Interacting with customers and their family increases the opportunity for bank, it is seen in foreign banks that passing the wishes on birthdays and marriage anniversaries is a news strategy for banks to keep in touch with customers. In a competitive market place, understanding customer's needs is very valuable. Satisfaction is the main source of attracting customers (Patterson et al., 1997). Customer loyalty has become a great challenge for

companies in the current era (Khalifa & Liu, 2003). In banking sector, it is very important to understand the factors leading to satisfaction, which will evidently lead to loyalty (Vanriel et al., 2001). The competition is increasing day-by-day regarding services in banking sector. It has been observed that Information Technology is replacing the human labor at a rapid rate (Jun & Cai, 2001). It has been proved that organizations need to give more consideration towards customer satisfaction and loyalty (Parasuraman & Grewal, 2000). Mols (2000) argued that the home-based Internet banking might lead to strong relationships with customers because customer expectations have a tendency to change over time. In the same manner, service quality is another important issue while gaining customer satisfaction and retention. Maintaining service quality is extremely necessary in current and highly competitive banking sector (Mefford, 1993). For this, bankers need to identify the attributes affecting customer loyalty. Literature gives very limited information related to these attributes (Jun & Cai, 2001). More research should be conducted to know about the attributes leading to customer satisfaction and customer loyalty (Parasurman et al., 1991). The measure of customer loyalty used in the study comprises of nine items:

- i. Satisfaction regarding e-banking
- ii. Accuracy of reporting transactions
- iii. Inconvenience in changing bank
- iv. Good relationship with staff
- v. Providing updated information regarding rewards and schemes
- vi. Ability to meet consumer's changing needs
- vii. Comfort of electronic banking channels to carryout banking transactions than physically going to branch
- viii. E-Banking has reduced the 'Gap' between the bank and the client
- ix. Preference to choose the Internet banking service of prime bank

Service quality has a great impact on customer loyalty and service quality is considered as a distinct feature which bears great importance for customer satisfaction and retention (Oliver, 1980). Service quality is determined by the comparison made by the customers between their expectations and experiences (Gurau, 2002; Parasuraman et al., 1988). Service quality is also linked with customer satisfaction. While some researchers are in the view that customer, satisfaction rather than service quality exerts stronger influences on buying intentions of the customers (Cronin and Taylor, 1992). Some other researchers also provided the strong empirical evidences supporting the fact that service quality increases the customer intentions to remain with any company. For example, Buzzell and Gale (1987) found out that service quality results in increased market share and repeated sales that ultimately leads to customer loyalty. Zeithaml et al. (1996) also concluded in their research that when organizations improve the quality of their services, customers' unfavorable intentions are decreased while favorable behavioral intentions are increased. Traditional service systems are still demanded by the customers along with the internet-based banking (Yang and Fang, 2004). Customer satisfaction is an important driver for better organizational performance especially in the banking sector due to increased competition. Several studies measured the relationship between customer loyalty and performance of the firm (Anderson et al., 1994; Al-Hawari and Warid, 2006). However, there is a severe shortage of literature that specifically measured the performance of banks with reference to service quality and customer satisfaction. It is found

that there is a significant relationship between service quality and financial performance (Duncan and Elliot, 2002). So it is concluded that superior delivery of services results into superior profitability (Kotler, 2003) and thus it may be win- win situation for banks as well as customers.

According to Smith and Bolton (2002) customer satisfaction has a major role in retail banking, and through this will lead to retention of customers. Thus there is a need to focus on quality of services, timings of banks, interaction of a banker with customers. It is equally important to provide online banking system and phone banking which works 24/7 and can communicate with a banker easily to know about any information related their accounts. Anderson et al. (1976) described customer satisfaction as a way of convenience and accessibility that make it easy for him/her to do the transactions of banking. On another side it is the bank's ability to deliver these benefits on a regular basis to its customers will have impact on customer satisfaction. Providing the best to customers is one strategy which banks have in their hands. It is the responsibility of every one working bank to provide quality services.

It is found that from the survey figures done by Chaoprasert and Elsey(2004) that it incur most cost for acquiring a new customer than maintain the existing customer. Customer satisfaction, customer relationship and quality services are there important aspects for banks to retain the customer for long run, and investments on these three elements gives profitability and market share. Quality service frequently result in more recurrent purchases and increase in market share. Customer satisfaction leads to customer loyalty and thereby leads to profitability and hence service quality is known as one of the basics of customer satisfaction. Hossain and Leo (2009) discussed that now a days banks understand that if they provide greater value of services than their competitors in the market then, customer will be loyal and consequently and on other hand, if banks ignore about the satisfaction level of customers and concentrate only on the profits that are getting better than its competitors banks can only earn high profits if they are able to position themselves better than competitor within a particular market. Accordingly, banks need to concentrate on service quality as an essential competitive strategy. The author defined service quality as a process consisting of series of intangible activities that takes place in one particular organization to reach its determined customer satisfaction about organization. As the study is revolving around three categories of banks, viz., public, private and foreign banks, it is important to understand the difference in the e-services provided by them, accordingly the hypothesis is:

H₁: There is a significant difference in the service quality features of private, public and foreign banks.

Rusbult (1988) argued that a person's loyalty and future relationship with a firm depends on their past relationship with it while evaluating all the alternatives available. The competence of a bank to handle conflict will determine customer satisfaction and customer loyalty. In addition, Fen & Lian (2007) established both customer satisfaction and service quality as predictors for re-patronage in restaurant industry moreover; they found customer satisfaction as a more suitable candidate for re-toleration. However, the same variable has yet been applied to banking industry further its presence has not been examined along other variables leading to customer loyalty. Studies have widely highlighted the relationship between customer satisfactions and customer loyalty (Rust & Zahorik, 1993; Fornell, 1992; Patterson & Spreng, 1997; Taylor & Baker, 1994; Bearden & Teel, 1983) emphasized on the importance

of customer satisfaction, as it is a significant predictor of customer loyalty. Likewise, Rust & Zahorik, (1993) declared that a contended customer exhibits greater retention and expressed significantly positive impact of customer satisfaction on customer loyalty. Particularly, customer satisfaction and repurchase intentions are inter-related (Rust & Zahorik, 1993; Taylor & Baker, 1994; Patterson & Spreng, 1997; Bolton, 1998; Hellier et al., 2003 and Fen & Lian, 2007). It is very important to identify the elements of service quality in order to gain customer satisfaction (Johnston, 1995). Angur et al. (1999) examined the applicability of alternative service quality measure in the Retail Banking industry in India. They conducted their research on the consumers of two major banks in India. They use SERVQUAL model to measure the overall service quality. They found that all the dimensions are not equally important in explaining variance in overall service quality. The result indicated that responsiveness and reliability seem to be the most important dimensions followed by the empathy and tangible dimensions; whereas, assurance appears to be the least important dimension. These all may be true for physical banking, but e-banking service quality has to focus on e-facilities, website interaction and security. Thus, though there is ample literature on service quality, yet there is less emphasis on e-banking services. Thus, there is still many areas especially the relation between service quality and customer loyalty, this study tries to fill these gaps to throw more insight on these perspectives especially by drawing a sample from public, private and foreign banks from NCR region in India.

H₂: There is a positive relation between e-banking service quality factors and Customer Loyalty.

Design and Methodology

This research study is based on random sampling and self-structured questionnaire with twenty one items has been used to gather data from the respondents from New Delhi, Gurgaon and Faridabad in Haryana and Noida & Greater Noida from Uttar Pradesh. The region covered is NCR, comprising of three states, Delhi, Uttar Pradesh and Haryana. In all 800 questionnaire were distributed, 415 were received and four hundred questionnaire complete in all aspects have been taken for the study. The response rate has been 51.87 percent. The questionnaire has been validated by academicians and banks managers. The suggestions given by them have been incorporated in the questionnaire.

For the purpose of conducting this study, primary data has been used. A well-structured questionnaire has been designed so as to take responses from customers who are using e-banking services and from prospective customers of e-banking also. The questionnaire is based on 5 point Likert Scale. The sample size is 400. The study has been conducted in Delhi & NCR. The reliability score of questionnaire has been presented in table I. The overall reliability has been 0.850.

Table I: Reliability Statistics

S No	Item Name	No of Items	Cronback Alpha
1	Service Quality	12	0.875
2	Customer loyalty	09	0.824
3	Total	21	0.850

Results and Discussion

This section discusses results by initially covering the profile of respondents, switching over to customers' perception of e-banking service quality features and finally focusing on service quality factors of e-banking.

Profile of Respondents

Table II: Bank category * Age Cross- tabulation

			Age			Total
			< 30	31-44	>45	
Private Sector Banks	Count		96	38	7	141
	% within Bank category		68.1%	27.0%	5.0%	100.0%
	% of Total		24.0%	9.5%	1.8%	35.2%
Public Sector Banks	Count		104	56	64	224
	% within Bank category		46.4%	25.0%	28.6%	100.0%
	% of Total		26.0%	14.0%	16.0%	56.0%
Foreign Sector Banks	Count		8	26	1	35
	% within Bank category		22.9%	74.3%	2.9%	100.0%
	% of Total		2.0%	6.5%	0.2%	8.8%
Total	Count		208	120	72	400
	% within Bank category		52.0%	30.0%	18.0%	100.0%
	% of Total		52.0%	30.0%	18.0%	100.0%

As shown through Table II, majority of respondents are in Public Sector Banks, followed by private sector banks. In age group of 31-44, similar trend is visible. In category greater than 45, also from a total of 72 respondents, 64 are in public sector banks.

The sample is dominated by males constituting 64 percent and females constituting 36 percent of sample. The number of males in all types of banks is higher than that of females. 11.2 % females belong to public sector banks, 24.0% females belong to private sector banks and remaining 0.8% to foreign banks. Regarding males, 24.0% belong to public sector banks, 32.0% to private sector banks and 8.0% to foreign banks. High Tax payers dominate in all Bank categories. Majority of respondents are in foreign sector banks.

Customers Perception of E-Banking Service Quality features
Service quality Features in private, public and foreign Banks

Table III: Mean score of Service quality Features

Service Quality Features	Bank Category						
	Private Bank	Sector	Public Banks	Sector	Foreign Banks	Sector	Total
Convenient operating hours	2.73		2.63		3.11		2.71
Safety of funds transfer on net	2.42		2.52		2.97		2.52
Reasonable service charges	3.67		3.84		4.51		3.84
ATM Services	2.38		2.43		3.71		2.52
Internet banking assistance	2.81		2.36		3.57		2.62
Depository services	2.38		2.36		3.20		2.44
Credit card Services	2.99		2.93		3.51		3.00
Debit card Services	2.72		2.32		3.43		2.56
Phone banking Facility	2.67		2.11		3.43		2.42
Other IT based services	2.33		2.11		2.71		2.24
One stop banking	3.35		3.75		3.66		3.60
Innovative services	2.35		2.18		3.57		2.36

As is clearly visible from Table III that foreign sector banks maintain supremacy among all service quality features. This means that in terms of service quality, consumers gave highest ratings to services quality features of foreign sector banks. In terms of convenience and Safety of funds transfer on net, public sector banks scored a little higher than private sector banks. In case of Internet banking assistance, private sector banks scored more. In case of ATM Services, public sector outperformed the private sector banks, but in debit and credit card services, it was vice- versa. In case of Innovative services, Public sector banks have a long way to go. One thing is very obvious from broad results that private and public sector banks need to learn more from foreign sector banks.

Service Quality Features and category of Banks

Next step was to find out whether there is a significant difference in the service quality features of Private, Public and Foreign banks. ANOVA was used to find out whether there is a significant difference according to different categories of banks (Table IV).

Table IV: ANOVA Results for Service Quality Features and category of Banks

		Sum of Squares	Df	Mean Square	F	Sig.
Convenient operating hours	Between Groups	7.230	2	3.615	3.236	.040*
	Within Groups	443.547	397	1.117		
	Total	450.778	399			
Safety of funds transfer on net	Between Groups	8.585	2	4.293	4.616	.010*
	Within Groups	369.212	397	.930		
	Total	377.798	399			
Reasonable service charges	Between Groups	20.147	2	10.074	15.852	.000***
	Within Groups	252.290	397	.635		
	Total	272.438	399			
ATM Services	Between Groups	54.719	2	27.360	36.076	.000***
	Within Groups	301.078	397	.758		
	Total	355.798	399			
Internet Banking	Between Groups	52.168	2	26.084	29.771	.000***
	Within Groups	347.830	397	.876		
	Total	399.997	399			
Depository Services	Between Groups	22.212	2	11.106	17.472	.000***
	Within Groups	252.348	397	.636		
	Total	274.560	399			
Credit card Services	Between Groups	10.428	2	5.214	15.498	.000***
	Within Groups	133.572	397	.336		
	Total	144.000	399			
Debit card Services	Between Groups	42.919	2	21.459	32.314	.000***
	Within Groups	263.641	397	.664		
	Total	306.560	399			
Phone Banking Facility	Between Groups	66.107	2	33.053	54.828	.000***
	Within Groups	239.333	397	.603		
	Total	305.440	399			
Other IT based Services	Between Groups	13.055	2	6.528	18.523	.000***
	Within Groups	139.905	397	.352		
	Total	152.960	399			
One stop banking	Between Groups	14.143	2	7.071	10.251	.000***
	Within Groups	273.857	397	.690		
	Total	288.000	399			
Innovative services	Between Groups	58.760	2	29.380	55.701	.000***
	Within Groups	209.400	397	.527		
	Total	268.160	399			

Hypothesis: There is a significant difference in service quality on the basis of nature of banks. ANOVA results shown in Table III are clearly indicative of difference in service quality features of three categories of banks. Thus this hypothesis that service quality features of private, public and foreign sector banks are different has been accepted as p value is

significant for all the features. After analysis the differences, post-hoc Turkey HSD were performed for each feature to understand where the difference was significant. The results are shown through Table V.

Table V: Post-hoc Tests for service quality features of Private, Public and Foreign sector Banks

Multiple Comparisons							
Tukey HSD							
Dependent Variable	(I) Bank category	(J) Bank Category	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Convenient operating hours	Private Sector Banks (Pvt)	(Pub)	.10103	.11363	.647	-.1663	.3683
		(For)	-.38379	.19961	.134	-.8534	.0858
	Public Sector Banks (Pub)	(Pvt)	-.10103	.11363	.647	-.3683	.1663
		(For)	-.48482*	.19212	.032	-.9368	-.0329
	Foreign Sector Banks (For)	(Pvt)	.38379	.19961	.134	-.0858	.8534
		(Pub)	.48482*	.19212	.032	.0329	.9368
Safety of funds transfer on net	Private Sector Banks	(Pub)	-.09942	.10367	.603	-.3433	.1445
		(For)	-.55299*	.18212	.007	-.9814	-.1245
	Public Sector Banks	(Pvt)	.09942	.10367	.603	-.1445	.3433
		(For)	-.45357*	.17528	.027	-.8659	-.0412
	Foreign Sector Banks	(Pvt)	.55299*	.18212	.007	.1245	.9814
		(Pub)	.45357*	.17528	.027	.0412	.8659
Reasonable service charges	Private Sector Banks	(Pub)	-.17262	.08570	.110	-.3742	.0290
		(For)	-.84762*	.15055	.000	-1.2018	-.4935
	Public Sector Banks	(Pvt)	.17262	.08570	.110	-.0290	.3742
		(For)	-.67500*	.14489	.000	-1.0159	-.3341
	Foreign Sector Banks	(Pvt)	.84762*	.15055	.000	.4935	1.2018
		(Pub)	.67500*	.14489	.000	.3341	1.0159
ATM Services	Private Sector Banks	(Pub)	-.05268	.09362	.840	-.2729	.1676
		(For)	-1.33840*	.16446	.000	-1.7253	-.9515
	Public Sector Banks	(Pvt)	.05268	.09362	.840	-.1676	.2729
		(For)	-1.28571*	.15828	.000	-1.6581	-.9133
	Foreign Sector Banks	(Pvt)	1.33840*	.16446	.000	.9515	1.7253
		(Pub)	1.28571*	.15828	.000	.9133	1.6581
Internet Banking	Private Sector Banks	(Pub)	.45137*	.10062	.000	.2146	.6881
		(For)	-.76292*	.17677	.000	-1.1788	-.3471
	Public Sector Banks	(Pvt)	-.45137*	.10062	.000	-.6881	-.2146
		(For)	-1.21429*	.17013	.000	-1.6145	-.8140
	Foreign Sector Banks	(Pvt)	.76292*	.17677	.000	.3471	1.1788
		(Pub)	1.21429*	.17013	.000	.8140	1.6145
Access to safety	Private Sector Banks	(Pub)	.02584	.08571	.951	-.1758	.2275
		(For)	-.81702*	.15056	.000	-1.1712	-.4628

software	Public Banks	Sector	(Pvt)	-.02584	.08571	.951	-.2275	.1758
			(For)	-.84286*	.14491	.000	-1.1838	-.5020
	Foreign Banks	Sector	(Pvt)	.81702*	.15056	.000	.4628	1.1712
			(Pub)	.84286*	.14491	.000	.5020	1.1838
Credit services	Private Banks	Sector	(Pub)	.05724	.06236	.629	-.0894	.2039
			(For)	-.52847*	.10954	.000	-.7862	-.2708
	Public Banks	Sector	(Pvt)	-.05724	.06236	.629	-.2039	.0894
			(For)	-.58571*	.10543	.000	-.8337	-.3377
	Foreign Banks	Sector	(Pvt)	.52847*	.10954	.000	.2708	.7862
			(Pub)	.58571*	.10543	.000	.3377	.8337
Debit Services	Private Banks	Sector	(Pub)	.40198*	.08760	.000	.1959	.6081
			(For)	-.70517*	.15389	.000	-1.0672	-.3431
	Public Banks	Sector	(Pvt)	-.40198*	.08760	.000	-.6081	-.1959
			(For)	-1.10714*	.14812	.000	-1.4556	-.7587
	Foreign Banks	Sector	(Pvt)	.70517*	.15389	.000	.3431	1.0672
			(Pub)	1.10714*	.14812	.000	.7587	1.4556
Phone Banking Facility	Private Banks	Sector	(Pub)	.55952*	.08347	.000	.3632	.7559
			(For)	-.76190*	.14663	.000	-1.1069	-.4170
	Public Banks	Sector	(Pvt)	-.55952*	.08347	.000	-.7559	-.3632
			(For)	-1.32143*	.14112	.000	-1.6534	-.9894
	Foreign Banks	Sector	(Pvt)	.76190*	.14663	.000	.4170	1.1069
			(Pub)	1.32143*	.14112	.000	.9894	1.6534
Other IT based Services	Private Banks	Sector	(Pub)	.22619*	.06382	.001	.0761	.3763
			(For)	-.38095*	.11211	.002	-.6447	-.1172
	Public Banks	Sector	(Pvt)	-.22619*	.06382	.001	-.3763	-.0761
			(For)	-.60714*	.10790	.000	-.8610	-.3533
	Foreign Banks	Sector	(Pvt)	.38095*	.11211	.002	.1172	.6447
			(Pub)	.60714*	.10790	.000	.3533	.8610
One stop banking	Private Banks	Sector	(Pub)	-.40248*	.08929	.000	-.6125	-.1924
			(For)	-.30963	.15685	.120	-.6786	.0594
	Public Banks	Sector	(Pvt)	.40248*	.08929	.000	.1924	.6125
			(For)	.09286	.15096	.812	-.2623	.4480
	Foreign Banks	Sector	(Pvt)	.30963	.15685	.120	-.0594	.6786
			(Pub)	-.09286	.15096	.812	-.4480	.2623
Innovative services	Private Banks	Sector	(Pub)	.16895	.07807	.079	-.0147	.3526
			(For)	-1.22391*	.13715	.000	-1.5466	-.9013
	Public Banks	Sector	(Pvt)	-.16895	.07807	.079	-.3526	.0147
			(For)	-1.39286*	.13200	.000	-1.7034	-1.0823
	Foreign Banks	Sector	(Pvt)	1.22391*	.13715	.000	.9013	1.5466
			(Pub)	1.39286*	.13200	.000	1.0823	1.7034
*. The mean difference is significant at the 0.05 level.								

For Convenient operating hours, Tukey HSD results are significant for Public Sector Banks and Foreign Sector Banks. Safety of funds transfer on net, there is a significant difference between Foreign Sector Banks and public sector banks and between Foreign Sector Banks and private sector banks, but not between public and private sector banks. In case of Reasonable service charges and ATM services again the above results are replicated i.e. there is a significant difference between Foreign Sector Banks and public sector banks and between Foreign Sector Banks and private sector banks, but not between public and private sector banks. For Phone Banking Facility and other IT based Services, there is a significant difference between all the categories. The results are varied in case of one stop banking and there is a significant difference between public and private sector banks but results are not significant for foreign sector banks. Regarding Innovative services, there is a there is a significant difference between Foreign Sector Banks and public sector banks and between Foreign Sector Banks and private sector banks, but not between public and private sector banks. Thus post-hoc tests throw more light on the differences of service quality on the basis of Bank Categories.

Service Quality Factors

Factor analysis was performed to reduce service quality features to smaller number of factors which could be used for regression analysis. Factor analysis results are depicted through table VI. Four factors emerged from analysis, viz. Website interface, Security, Convenience and Access. These four service quality factors explained 84.014 percent of variation.

Table VI: Forms of Service Quality in E-Banking

Factors	Features	Component Loadings			
		1	2	3	4
Website Interface Eigen Value: 3.630.	Innovative services	.965			
	One stop banking	.965			
	Internet banking Assistance	.870			
	Other IT based services	.769			
% of Variation		30.249			
Security Eigen Value :2.338	Safety of funds transfer on net		.764		
	Access to Security software		.757		
% of Variation			20.646		
Access Eigen Value: 2.460	Phone banking facility			.942	
	Debit card services			.936	
	ATM services			.671	
	Credit card services			.812	
% of Variation				20.504	
Convenience Eigen Value :1.514	Low /reasonable service charges				.763
	Convenient operating hours	.			.635
% of Variation					12.615
Total Variation		84.014			

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

In website interface, Innovative services and One stop banking dominate with higher loadings. In security, Safety of funds transfer on net and access to security software have almost similar loadings and are equally important. In Access, Phone banking facility, and Debit card services are higher on priority. In Convenience, Low /reasonable service charges are getting more priority than convenient working hours. This means that in developing countries there is still emphasis on providing cost effective services. Overall results highlight that website interface has the highest Eigen values and are relatively considered more important. Kaiser-Meyer-Olkin Measure of sampling adequacy is 0.737 which is more than 0.5, so the model is also acceptable.

Relationship Between Customer Loyalty and e-banking service quality Factors

Table VII: Relationship Between Customer Loyalty and e-banking service quality Factors

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.493 ^a	.243	.241	.84333	
2	.668 ^b	.446	.443	.72225	
3	.717 ^c	.514	.510	.67740	
4	.722 ^d	.521	.516	.67350	2.038
a. Predictors: (Constant), Convenience					
b. Predictors: (Constant), Convenience, Access					
c. Predictors: (Constant), Convenience, Access, Security					
d. Predictors: (Constant), Convenience, Access, Security, Website Interface					
e. Dependent Variable: Customer Loyalty					
ANOVA ^a					
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	90.698	1	90.698	127.527	.000 ^b
Residual	283.062	398	.711		
Total	373.760	399			
Regression	166.668	2	83.334	159.753	.000 ^c
Residual	207.092	397	.522		
Total	373.760	399			
Regression	192.046	3	64.015	139.505	.000 ^d
Residual	181.714	396	.459		
Total	373.760	399			
Regression	194.587	4	48.647	107.245	.000 ^e
Residual	179.173	395	.454		
Total	373.760	399			
Coefficients					

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Convenience	.477	.034	.493	14.140	.000
Access	.436	.034	.451	12.941	.000
Security	.252	.034	.261	7.480	.000
Website Interface	.080	.034	.082	2.367	.018

The last step of research was to find out the key determinants of E-banking loyalty. The factors that emerged through factor analysis were taken as independent variables. The results of regression are shown through table VII. All four factors, viz. Convenience, Access, Security and Website Interface emerged as predictors of the model. With the inclusion of all four factors, following a step wise regression, the value of adjusted R-Square increased from 0.241 to 0.516. This model explains 51.6 percent of variation. F-value is significant depicting the overall acceptance of the model. The results have been reflected through figure 1.

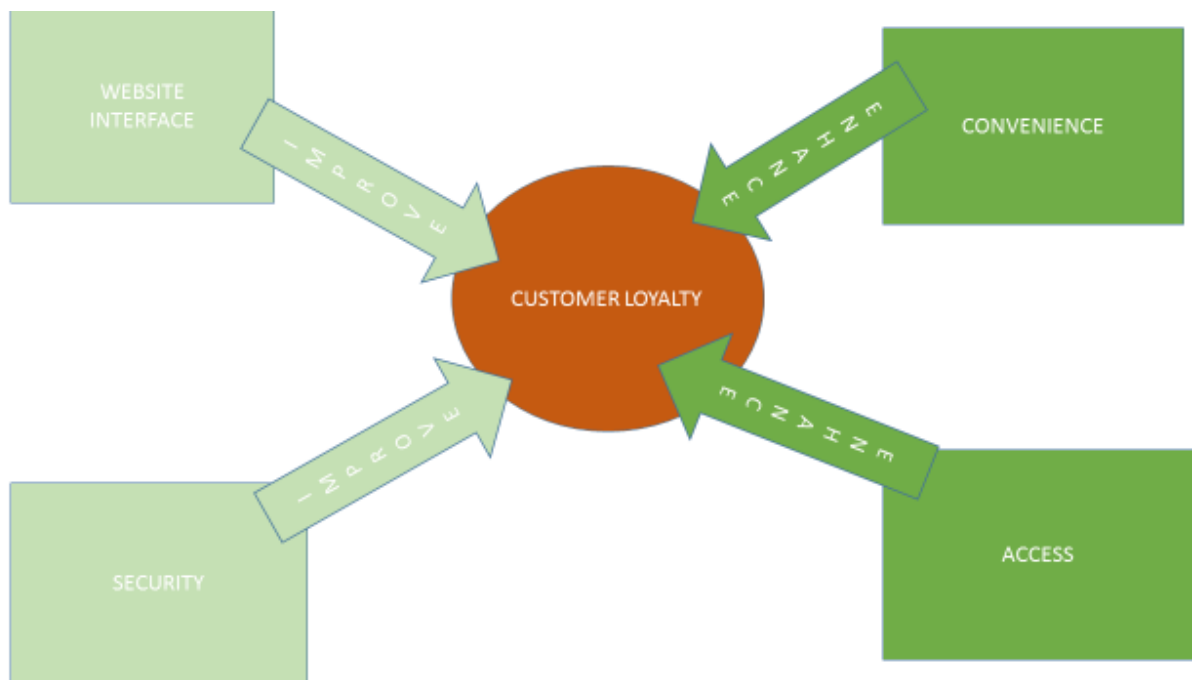


Figure 1: Factors Influencing Customer Loyalty in e-banking.

On the basis of results, the study has classified the service quality factors influencing customer loyalty as improvement areas or as enhancing factors. Improvement areas are shown through light shaded squares, viz. comprising of security and website interface and enhancing factors are depicted through dark shaded squares, namely Convenience and Access. Banks can choose the areas they have to improve by focusing more on website interface and security. Similarly customer loyalty can be enhanced by access and convenience.

Conclusion

The first objective of the paper was to compare the key features of E-Banking Service quality of private, public and foreign banks. The results reflected that customers perceive that foreign sector banks provided better service quality features than private and public sector banks. For convenience and Safety of funds transfer on net, public sector banks have higher ratings than private sector banks. Private sector scored better than public in terms of many features, which clearly reflects that there is a need to improve service quality delivery of public sector banks. ANOVA results highlight that there is a significant difference in the service quality features of Private, Public and Foreign banks. The first hypothesis that there is a significant difference in the service quality features of Private, Public and Foreign banks has been accepted.

Factor analysis threw more light on the factors of e-banking service quality and results highlighted that e-banking service quality features could be categorised into Convenience, Access, Security, and Website Interface. The Eigen value and percentage of variation was higher for advanced and progressive services as compared with conventional and allied services including ATM, Debit card related services.

Regression analysis helped find important predictors of service quality. The results reflect that these four services explain 56.4 percent of variation. All these services are positively associated with consumer satisfaction. Thus H₂: There is a positive relation between e-banking service quality factors and Customer loyalty has been accepted.

Joseph et al. (1999) investigated the influence of internet on the delivery of banking services and convenience was one of the important factors of service quality. Jun and Cai (2001) also identified access as one of the dimensions of e-banking service quality. Jayawardhena (2004) transforms the original SERVQUAL scale to five quality dimensions: access, website interface, trust, attention and credibility. The present study focuses on e-banking service quality factors and these are website interface, access, security and convenience. Convenience is the reason for switching over to online banking. This study has come out with security as fourth factor, as e-banking service quality has to rely on security software for enhancing trust. The present study also focuses on the importance of these factors based upon customers' perception. Convenience and access have higher B-value than security and website interface, thus accordingly the banks can focus on those factors that is lacking and improve their website interface and security software to improve performance. These two are improvement areas, while focus on access and convenience can result in enhancing performance. Thus, to enhance performance there is a need to focus on access and convenience.

Limitations of the Study

- The generalization of this research may be affected because it is not possible to conduct interviews of customers as questionnaires have generally closed ended questions. This study covers NCR region, and not entire India due to limitation of time.
- Customers may vary from bank to bank and it is very difficult for us to target all the customers.
- This study includes e-banking users only for analysis. The customers who are ignorant about e-banking services are outside the scope of this study.

Suggestions for Future Research

E-banking in India is gaining momentum at a faster pace but it is a new phenomenon for banks and for Indian banking customer also. It includes a lot of issues that can be considered for various perspectives. This study highlights some of the service quality features that are contributing towards customer loyalty in three categories of banks i.e., public, private and foreign sector banks. There is still room for further area of research as how banks should incorporate all these service features in gaining customer loyalty and customer retention. Further research can be on making comparisons of different developed economies banks with Indian banks like American, European banking websites & their e-banking practices with Indian banking websites and its e-banking practices for studying service quality variables that enhance the customer loyalty in banks. The ongoing technological innovations in Indian banking sector on regular basis can always be a good area of further research.

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