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Kumbhar, Vijay

Abasaheb Marathe College, Rajapur (Maharashtra) India, Shivaji University, Kolhapur Dist- Kolhapur (Maharashtra) India

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FACTORS AFFECTING ON CUSTOMERS' SATISFACTION: AN EMPIRICAL INVESTIGATION OF ATM SERVICE

VIJAY M. KUMBHAR*

*Rayat Shikshan Sanstha Satara's Abasaheb Marathe College
Rajapur (Maharashtra) India 416702
E-mail: vijay.kumbhar9@gmail.com

ABSTRACT

The present empirical study focuses on identifying key factors that have influences customers satisfaction in ATM service provided by public and private sector banks. For the purpose of the study primary data were collected using schedule and collected data from March to November 2010. Results of factor analysis, correlation and regression analysis show that a cost effectiveness, easy to use and security and responsiveness in ATM service were most important factors in customer satisfaction.

KEYWORDS: *E-service Quality, ATM, Customer Satisfaction, Cost Effectiveness.*

INTRODUCTION

Recent ten years evidenced that electronic based business models are replacing conventional ones and organizations are rethinking business process designs and customer relationship management strategies. Banks are no exception to this transformation; a use of Information and Communication Technology (ICT) is revolutionizing the banking services through various unthinkable innovations (Islam, Biswas, & Kumar, 2007). Now Indian banks are investing money in ICT infrastructure to provide e-banking services to their customers. It provides various alternative e-channels to using banking services e.g. ATM, credit card, debit card, internet banking, mobile banking, electronic fund transfer, electronic clearing services etc. However, as per Indian e-banking scenario ATM is most acknowledged e-banking channel as compared to other e-channels.

The history of ATM can be traced back to the 1960s, when the first ATM machine was invented by John Shepherd-Barron he was managing director of De La Rue Instruments. That machine used by Barclays Bank (Barclays Bank in Enfield Town in North London, United Kingdom) in 27 June 1967 (Wikipedia E-encyclopedia). However, the first bank to

introduce the ATM concept in India was the Hong Kong and Shanghai Banking Corporation (HSBC) in the year 1987 followed by Bank of India in 1988. According to R.B.I. annual report (2009-10) almost commercial banks are providing ATM facilities to its customers and to date 44,620 ATMs installed by public and private sector banks in India. ATMs have offering 24 hours banking services to bank customers like cash withdrawal, fund transfer, balance inquiry, card to card transfer, bill payment, accept deposits etc. However, several studies posited that, there is various service quality attributes are influencing customer satisfaction in ATM service settings. Therefore, this study intended to appraise the relationship between e-service quality dimensions and customer satisfaction and to identify important determinants of customer satisfaction in ATM service settings in the Indian context.

REVIEW OF LITERATURE

Available literature regarding to customer satisfaction in service industry evident that service quality is a more specific judgement which can lead to a broad evaluation of customer satisfaction (Oliver, 1993; Parasuraman, et al, 1985; 1988). However, Zeithaml et al (2000); Parasuraman, et al, (2005) posited that e-service quality is important to assess customer satisfaction in the e-service setting.

Parasuraman, et al, (1988) developed SERVQUAL instrument to assess service equality of traditional services or non-electronic service which containing five dimensions i.e. *Reliability, Responsiveness, Assurance, Empathy and Tangibles*. However, according to Zeithaml, et al. (2000) mentioned that apart from *Reliability, Responsiveness, Assurance/trust and Security/privacy* there are another important dimensions *i.e. Access, Flexibility, Ease of navigation, Efficiency, Price knowledge, Site aesthetics and Customization /personalization*. Parasuraman et al (2005) developed E-S-Qual and E-Res-Qual scales to assess e-service quality and used *efficiency, fulfilment, system availability, privacy, responsiveness, compensation, and contact* as service quality dimensions. Many researchers like Mcandrews, (2003); Komal & Singh, (2009); Dilijonas et al., (2009); Joseph and Stone (2003) and Mobarek (2007) etc. used either SERVQUAL or E-S-Qual and E-Res-Qual scale to examine service quality.

Automated service quality is defined as the customer's overall evaluation of the excellence of the provision of services through electronic networks such as the internet, Automated Teller Machine (ATM), and telephone banking (Santos 2003). Researches' relating to especially ATM service quality realized that, the Automated Teller Machine (ATM) is one type of innovation that can mechanically accept deposits, issue withdrawals, transfer funds between accounts, and collect bills**.** It has altered the relationship between banks and their depositors, as well as the level of service quality of banking services (Davies et al., (1996); Mcandrews, 2003; Komal & Singh, 2009). Researchers identified *secure and convenient location, adequate number of ATM, user-friendly system, and functionality of ATM*. Plays important role in customers' satisfaction. While, Joseph and Stone (2003); Mobarek (2007) and Dilijonas et al., (2009) mentioned that *adequate number of ATMs, convenient and secure location and user-friendly system, speed, minimum errors, high uptime, cash backup, cost, and service coverage* are essential service quality aspects of ATM service.

After reviewing the literature intensively, it is observed that there currently exists no generally accepted model of ATM service quality including cost effectiveness. The cost effectiveness aspect of ATM service in the customers' point of view is missing in literature. However, some informative articles posited that, ATM is cost effective way to access bank account. But no scientific studies were conducted to examine the importance of cost effectiveness of the ATM service including other e-service quality dimensions. In summary, the reviewed literature shows positive relationships between service quality and customers' satisfaction. Therefore, the following hypotheses are formulated:

H0a: There is no significance difference in service quality of ATM service provided by public and private sector banks

H1a: There is significance difference in service quality of ATM service provided by public and private sector banks

H0b: There is no significant relationship between overall service quality and customers' satisfaction in ATM service.

H1b: There is significant relationship between overall service quality and customers' satisfaction in ATM service.

H0c: Overall service quality was not significant predictor of customers' satisfaction in ATM services.

H1c: Overall service quality was significant predictor of customers' satisfaction in ATM services.

MATERIAL AND METHODS

The A quantitative study, involving the administration of a survey was conducted in order to empirically validate the identified factors of ATM service quality. The primary data were conducted by 210 customers of public and private sector banks in Satara and Kolhapur cities of Maharashtra state in India. The samples of this study have been selected by convenience sampling method and are limited to the ATM users of six commercial banks i.e. SBI; Bank of Baroda, Corporation Bank, IDBI Bank Ltd. Axis Bank Ltd and HDFC Bank Ltd. The survey instrument consisted of 24 items which were identified through a comprehensive review of the e-service quality literature. The instrument was divided into two main sections, first was related demographic information of the respondents and second is related to perception of ATM service quality and overall satisfaction. Statements in the second section represented each groups of items measuring a particular dimension. Only those respondents who are using ATM services of public and private sector bank were selected as sample for this study. Respondents were asked to give their perception of the service quality level of ATM services on a 5–point Likert scale (1= Strongly Disagree, 2=disagree, 3=Neutral, 4=Agree and 5= Strongly Agree) and a total of 210 useable surveys were collected. The data were analyzed by using SPSS 18.0 software. As per the requirements of the study reliability test conducted and only those dimensions has been used for further analysis which having Cronbach's alpha above .700, multiple regression and correlation analysis were performed to identify predictors of customer satisfaction.

CUSTOMER PROFILE AND USE OF ATM SERVICES

Table No. 1 shows that out of total samples 80% are male and 20% are female. 54.67% are below 35 years, 34% are 36 to 50 years and only 11.33 % are more than 51 years old. Most of ATM users are either are employees or businessmen (37.33% and 30.67% respectively), 44% of respondents having annual income below Rs. 3 lakh and 46.67% having less than Rs. 15 Lakh. Educational status of the respondents shoes that most of graduates and post graduate persons. This data indicates that higher educated and who are employees or businessmen and having annual income less than Rs. 15 lakh are core users of ATM service in India. Data also shows that very few (20%) females and senior persons are using ATM services in India.

Table no. 1: Demographics of Respondents (%)

		Type of Banks		
		Pub. Banks	Pvt. Banks	Total
Gender	Female	23.00%	14.00%	20.00%
	Male	77.00%	86.00%	80.00
Total		**100.00%**	**100.00%**	**100.00%**
Age	Below 25	25.00%	16.00%	22.00%
	25-35	31.00%	36.00%	32.67%
	36-50	31.00%	40.00%	34.00%
	51-60	13.00%	8.00%	11.33%
Total		**100.00%**	**100.00%**	**100.00%**
Profession	Employee	38.00%	36.00%	37.33%
	Businessmen	29.00%	34.00%	30.67%
	Student	22.00%	2.00%	15.33%
	Professional	9.00%	18.00%	12.00%
	Retired	2.00%	10.00%	4.67%
Total		**100.00%**	**100.00%**	**100.00%**
Annual Income	Dependents	8.00%	2.00%	6.00%
	Below 3 Lakh	46.00%	40.00%	44.00%
	3 to 15 Lakh	45.00%	50.00%	46.67%
	Above 15 Lakh	1.00%	8.00%	3.33%
Total		**100.00%**	**100.00%**	**100.00%**
Education	>HSC	4.00%	6.00%	4.67%
	HSC	6.00%	8.00%	6.67%
	Graduate	49.00%	54.00%	50.67%
	Post-Graduate	41.00%	32.00%	38.00%
Total		**100.00%**	**100.00%**	**100.00%**

Source: Survey

RELIABILITY ANALYSIS

The Cronbach's alpha reliability test has been used to identify the validity of items used in survey. According to Hendrickson et al (1993) and McGraw and Wong (1996) the alpha of a scale should be greater than .700 for items to be used together as a scale. Therefore minimum 0.700 coefficient alpha values accepted to

finalize the item validity. As per shown in Table No 2 shows that all dimensions have appropriate reliability.

Table No. 2 : Reliability Statistics

	Construct	Items	Cronbach's Alpha
1	System Availability	3	.780
2	Fulfillment and Efficiency	4	.701
3	Security & Responsiveness	4	.749
4	Easiness	3	.712
5	Convenience	3	.714
6	Cost Effectiveness	3	.722
7	Problem Handling and Contact	3	.780

DESCRIPTIVE STATISTICS

Descriptive statistics (Table No. 3) shows that mean of perception relating to various service quality aspects is ranging between 2.5 to 4.2. Overall perception indicates that customers' perception regarding System Availability, Fulfillment and Efficiency and Security & Responsiveness is higher than other dimensions of ATM service.

Table No. 3: Descriptive Statistics

Dimensions	Bank Type	N	Mean	Std. Devi.	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
System Availability	Public	105	4.0403	.63096	.06310	3.9151	4.1655
	Private	105	4.2278	.69626	.09847	4.0299	4.4257
	Total	210	4.1028	.65712	.05365	3.9968	4.2088
Fulfillment and Efficiency	Public	105	4.0037	.45484	.04548	3.9135	4.0939
	Private	105	4.1044	.50126	.07089	3.9619	4.2469
	Total	210	4.0373	.47154	.03850	3.9612	4.1133
Security & Responsiveness	Public	105	3.9227	.42271	.04227	3.8388	4.0066
	Private	105	3.8410	.39808	.05630	3.7279	3.9541
	Total	210	3.8955	.41513	.03390	3.8285	3.9624
Easiness	Public	105	3.5550	.42254	.04225	3.4712	3.6388
	Private	105	3.6054	.34004	.04809	3.5088	3.7020
	Total	210	3.5718	.39651	.03237	3.5078	3.6358
Convenience	Public	105	3.8800	.85316	.08532	3.7107	4.0493
	Private	105	3.9400	.98271	.13898	3.6607	4.2193
	Total	210	3.9000	.89555	.07312	3.7555	4.0445
Cost Effectiveness	Public	105	2.9800	.91541	.09154	2.7984	3.1616
	Private	105	2.5900	.89608	.12672	2.3353	2.8447
	Total	210	2.8500	.92459	.07549	2.7008	2.9992
Problem Handling and Contact	Public	105	3.1156	.62013	.06201	2.9926	3.2386
	Private	105	3.0872	.71858	.10162	2.8830	3.2914
	Total	210	3.1061	.65230	.05326	3.0009	3.2114
Overall	Public	105	3.7000	.92660	.09266	3.5161	3.8839

Satisfaction	Private	105	3.8800	.59385	.08398	3.7112	4.0488
	Total	210	3.7600	.83288	.06800	3.6256	3.8944

Source: Survey

COMPARISON OF SERVICE QUALITY

T test were performed to identify that if there is significant difference (H0a: μ1 = μ2) in service quality of ATM service quality of public and private sector banks.

H0a: There is no significance difference in quality of ATM service provided by public and private sector banks

H1a: There is significance difference in quality of ATM service provided by public and private sector banks

The result of the T test shows that there no significance difference in service quality of ATM service provided by public and private sector banks. However, cost effectiveness of the ATM service provided by public and private sector banks were not same. Table No. 4 indicates that there is significant difference (T = 2.447, df = 1, 148; P < 5 (P = 0.014)) in cost effectiveness of ATM service provided by public and private sector banks it leads to reject null hypothesis in case of cost effectiveness. However, other result leads to accept null hypothesis.

Table No. 4 : Independent Samples Test

		Levene's Test for Equality of Variances		T Test			
Dimensions		**F**	**Sig.**	**t**	**Df**	**Sig. (2-tailed)**	**Decision**
System Availability	Equal variances assumed	.328	.568	-1.657	148	.100	Accept Null
	Equal variances not assumed			-1.603	89.991	.112	
Fulfillment and Efficiency	Equal variances assumed	.125	.725	-1.235	148	.219	Accept Null
	Equal variances not assumed			-1.196	90.092	.235	
Security & Responsiveness	Equal variances assumed	.433	.512	1.137	148	.257	Accept Null
	Equal variances not assumed			1.161	103.537	.249	
Easiness	Equal	2.651	.106	-.733	148	.465	Accept

	variances assumed						Null
	Equal variances not assumed			-.787	118.815	.433	
Convenience	Equal variances assumed	.088	.767	-.386	148	.700	Accept Null
	Equal variances not assumed			-.368	86.791	.714	
Cost Effectiveness	Equal variances assumed	.884	.349	2.477	148	.014	Reject Null
	Equal variances not assumed			2.495	100.002	.014	
Problem Handling and Contact	Equal variances assumed	1.081	.300	.251	148	.802	Accept Null
	Equal variances not assumed			.239	86.360	.812	

RELATIONSHIP BETWEEN SERVICE QUALITY AND OVERALL CUSTOMER SATISFACTION

Mcandrews, (2003); Komal & Singh, (2009); Mobarek (2007) and Dilijonas et al., (2009) mentioned that service quality have significant relationship with overall customers satisfaction in ATM service. However, present research dose not supports this conclusions brought by previous researchers. Table No. 5 indicates that most of service quality dimensions were positively correlated with other service quality dimensions but System Availability, Fulfillment and Efficiency, Security & Responsiveness, Easiness, Convenience and Problem Handling and Contact were not significantly correlated with overall satisfaction in ATM service. However, cost effectiveness of ATM service was positively and significantly correlated with overall customers' satisfaction in ATM service. In fact Table No. 5 also indicates that cost effectiveness was not correlated with any other service quality dimensions under study, it was only related to overall customers' satisfaction. Therefore, Hob was accepted in case of Fulfillment and Efficiency, Security & Responsiveness, Easiness, Convenience and Problem Handling and Contact. However, H1b was accepted in case of cost effectiveness.

Table No. 5: Correlations[a]

			1	2	3	4	5	6	7	Satis.
1	System Availability	Coefficient	1.000	.796**	.249**	.239**	.359**	-.101	.121	.043
		Sig. (2-tailed)	.	.000	.002	.003	.000	.220	.139	.600
2	Fulfillment and Efficiency	Coefficient	.796**	1.000	.440**	.323**	.337**	-.006	.147	-.017
		Sig. (2-tailed)	.000	.	.000	.000	.000	.941	.073	.841
3	Security & Responsiveness	Coefficient	.249**	.440**	1.000	.492**	.228**	.012	.231**	.036
		Sig. (2-tailed)	.002	.000	.	.000	.005	.881	.004	.663
4	Easiness	Coefficient	.239**	.323**	.492**	1.000	.164*	-.013	.321**	-.031
		Sig. (2-tailed)	.003	.000	.000	.	.046	.875	.000	.704
5	Convenience	Coefficient	.359**	.337**	.228**	.164*	1.000	-.012	.299**	-.060
		Sig. (2-tailed)	.000	.000	.005	.046	.	.887	.000	.469
6	Cost Effectiveness	Coefficient	-.101	-.006	.012	-.013	-.012	1.000	.071	.200*
		Sig. (2-tailed)	.220	.941	.881	.875	.887	.	.385	.014
7	Problem Handling and Contact	Coefficient	.121	.147	.231**	.321**	.299**	.071	1.000	.068
		Sig. (2-tailed)	.139	.073	.004	.000	.000	.385	.	.410
8	Overall Satisfaction	Coefficient	.043	-.017	.036	-.031	-.060	**.200***	.068	1.000
		Sig. (2-tailed)	.600	.841	.663	.704	.469	**.014**	.410	.

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
a. Listwise N = 210

RESULTS OF REGRESSION ANALYSIS

A positive relationship between service quality and customer satisfaction in ATM service was found (see Table No. 6); that is, the perceived service quality of ATM service provided by public and private sector banks is related to the perceived satisfaction customers in the Indian banking industry. Therefore, H0a is rejected and H1a is accepted i.e. "*H1c: Overall service quality is significant predictor of customers' satisfaction in ATM services."* Overall Service quality of ATM service lead to satisfaction (R= .755 at 64.75% of variance).

Table No. 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.755[a]	.647	.567	.54806

Coefficients[b]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.111	.194		5.717	.000
	Overall Service Quality	.729	.052	.755	14.004	.000

a. Predictors: (Constant), Overall Service Quality
b. Dependent Variable: Overall Satisfaction

As per the regression result regression equation can be write as:

$Y = 1.111 + .729*X_1 + e$

here,

Y = Customer Satisfaction
X_1 = Overall Service quality
e = error term

FACTOR ANALYSIS

Confirmatory Factor Analysis (CFA) on the seven dimensions was performed to know important factors of customer satisfaction in TAM service. Using Principal Components, as an extraction method and followed by Varimax rotation of components with Eigenvalue greater than 1.0, the data "unfolded" into seven factors. Table No. 7 reveals that, these seven factors were explained 64.75% of the variance. However, factor 1, 2 and 3 were explains 12.88 to 11.40% of variance.

Table No. 7: Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumu. %	Total	% of Variance	Cumu. %	Total	% of Variance	Cumu. %
1	6.464	26.934	26.934	6.464	26.934	26.934	3.091	12.881	12.881
2	2.205	9.186	36.120	2.205	9.186	36.120	2.791	11.630	24.511
3	1.803	7.514	43.634	1.803	7.514	43.634	2.737	11.404	35.915
4	1.566	6.527	50.161	1.566	6.527	50.161	2.358	9.824	45.739
5	1.332	5.550	55.711	1.332	5.550	55.711	1.992	8.300	54.039
6	1.164	4.851	60.562	1.164	4.851	60.562	1.288	5.366	59.405
7	1.005	4.189	64.751	1.005	4.189	64.751	1.283	5.346	64.751
8	.932	3.885	68.636						
9	.846	3.524	72.160						

Extraction Method: Principal Component Analysis.

Table No. 7 indicates that there are seven components are extracted using rotated Varimax method. It indicates that System availability is first factor, Easiness is second factor, Security & Responsiveness is third factor, Convenience is forth factor, cost effectiveness is fifth factor, Fulfillment and Efficiency is sixth factor, Problem Handling and Contact is seventh factor in the customer satisfaction in ATM service settings.

Rotated Component Matrix							
	Component						
	1	2	3	4	5	6	7
System Availability1	-.006	.100	.091	.001	**.836**	-.070	.073
System Availability2	.013	.167	.192	-.065	**.845**	-.024	.135
System Availability3	.096	-.027	.234	-.225	**.504**	.094	.424
Fulfillment and Efficiency 1	.078	.237	.232	-.077	.184	.006	**.506**
Fulfillment and Efficiency 2	.120	.198	.217	.025	.211	.122	**.401**
Fulfillment and Efficiency 3	-.127	-.054	.332	.053	.125	.226	**.701**
Fulfillment and Efficiency 4	-.087	.019	.269	.161	.076	-.092	**.649**
Security & Responsiveness 1	-.002	.234	**.741**	.169	.085	-.062	.081
Security & Responsiveness 2	.207	.334	**.523**	.171	.280	-.040	-.090
Security & Responsiveness 3	-.110	.178	**.845**	.113	.010	.032	.044
Security & Responsiveness 4	-.014	.054	**.881**	.043	.084	-.018	.090
Easiness 1	.308	**.408**	.088	.369	.262	.348	.263
Easiness 2	.049	**.705**	.300	.093	.045	-.007	.035
Easiness 3	-.089	**.691**	.279	.169	.184	.132	.160
Convenience1	.080	-.099	.273	**.690**	.212	.118	.104
Convenience2	.176	.083	-.133	**.531**	.499	.277	-.013
Convenience3	.043	.029	-.088	**.617**	.216	-.185	.412
Cost Effectiveness 1	**.650**	.068	.164	.202	-.007	.054	.359
Cost Effectiveness 2	**.712**	.166	.224	.145	-.004	-.221	.150
Cost Effectiveness 3	**.595**	-.041	.223	.327	-.098	.248	-.082
Problem Handling and Contact 1	.027	-.076	-.017	-.054	.022	**.853**	-.005
Problem Handling and Contact 2	-.013	-.005	-.002	.025	.055	**.886**	.019
Problem Handling and Contact 3	-.064	.176	-.100	-.022	.188	**.544**	.322
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.							

CONCLUSION

A result of data analysis and hypothesis tests indicates that a mean score of perception relating to various service quality aspects is ranging between 2.5 to 4.2 and other than cost effectiveness of ATM service perception about remaining all service quality dimensions is approximate same in public and private sector banks. Overall results shows that cost effectiveness of ATM service were core service quality dimension and it were significantly affecting on overall customer satisfaction in ATM service provided by commercial banks. However, result of factor analysis indicates that cost effectiveness, easy to use and security & responsiveness were influence customer satisfaction at 36% variance. Therefore, banks should concentrate their efforts on these dimensions for cater better ATM service to satisfy their customers.

REFERENCES

1. Banstola, A. (2007). Prospects and Challenges of E-banking in Nepal. *The Journal of Nepalese Business Studies,Vol. IV No. 1 Dec. 2007* , 96-104.

2. Bolton, Ruth N. and James H. Drew (1991), "A Multistage Model of Customers' Assessments of Service Quality and Value," Journal of Consumer Research, 17 (March), 375- 384

3. Cronin, J.J. and S.A. Taylor, (1994). SERVPERF versus SERVQUAL: Reconciling Performance-Based and Perceptions-Minus- Expectations Measurement of Service Quality, The Journal of Marketing, Vol. 58, No. 1 (Jan., 1994), pp. 125-131, http://www.jstor.org/stable/1252256

4. Choudhury, Koushiki(2007), Service Quality Dimensionality: A Study of the Indian Banking Sector, Journal of Asia-Pacific Business, 8: 4, 21-38

5. Davies, F., M, L., & Curry, B., (1996) ATM users' attitudes: a neural network analysis, Marketing Intelligence & Planning 14/2, 26–32

6. Dilijonas, D, K., D., Sakalauskas, V. & Simutis, R. (2009). Sustainability Based Service Quality Approach for Automated Teller Machine Network, Electronic copy available on http://www.vgtu.lt/leidiniai/ leidykla/ KORSD_2009/PDF/241-246-p100-Dilijonas-47.pdf

7. Hendrickson, Anthony R., Patti D. Massey, and Timothy Paul Cronan. 1993. "On the Test-Retest Reliability of Perceived Usefulness and Perceived Ease of Use Scales." *MIS Quarterly,* June, 227-229.

8. Islam, R., Biswas, S. K., & Kumar, P. (2007). Customer Satisfaction of ATM Service: A Case Study of HSBC ATM. *Working paper,Electronic copy available at: http://ssrn.com/abstract=990242* .

9. Jain, S.K. and G. Gupta, (2004). Measuring service quality: Servqual vs. servperf scales, *VIKALPA,29:25-37 http://classshares.student.usp.ac.fj/TS208/2006%20Material/TS208%20Resources/Measuring%20Service%20Quality%20SERVQUAL%20vs.%20SERVPERF.pdf*

10. Johnston, R. (1995). The determinants of service quality: satisfiers and dissatisfiers. *International Journal of Service Industry Management , Vol. 8* (5), 53-71.

11. Joseph, M., & Stone, G. (2003).An empirical evaluation of US bank customer perceptions of the impact of technology on service delivery in the banking sector. International Journal of Retail & Distribution Management, 31(4), 190-202.

12. Kathryn Waite, (2006) Task scenario effects on bank web site expectations, Internet Research, Vol. 16 No. 1, 2006, pp. 7-22

13. Khan, M. M. (2009). Service quality evaluation in internet banking:an empirical study in India. *Int. J. Indian Culture and Business Management , Vol. 2,* (No. 1,), 30-46.

14. Komal, Singh, S. (2009). Impact of ATM on Customer Satisfaction (A Comparative Study of SBI, ICICI & HDFC bank). Business Intelligence Journal - August, 2(2), 276-87

15. McGraw, K. O., and Wong, S. P. (1996) Forming Inferences about Some Intraclass Correlation Coefficients. *Psychological Methods*, 1, p30-46.

16. Mcandrews, J. J. (2003). Automated Teller Machine Network Pricing – A Review of the Literature. *Review of Network Economics , Vol.2, Issue 2 – June 2003*, 146-158.

17. Mobarek, A. (2007). E-Banking Practices and Customer Satisfaction - A Case Study in Botswana, Electronic copy available at http://papers.ssrn.com/sol3/ papers. cfm?abstract_id=1011112

18. Oliver RL, (1993), Cognitive, Affective, and Attribute Bases of the Satisfaction Response Journal of Consumer Research, Vol. 20, December, pp.418-430

19. Oliver, R. L. (1980). A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions,. *Journal of Marketing Research, , 17*, 460-469.

20. Parasuraman A. Zeithaml Valarie A. and Malhotra Arvind (2005) E-S-QUAL: A Multiple-Item Scale for Assessing Electronic Service Quality, *Journal of Service Research, Volume 7, No. X,* (Islam, Biswas, & Kumar, 2007)*Month 2005 1-21*

21. Parasuraman, A. Valarie A. Zeithaml, Leonard L. Berry (1985) A Conceptual Model of Service Quality and Its Implications for Future Research, *The Journal of Marketing, Vol. 49, No. 4 (Autumn, 1985), pp. 41-50*

22. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988), "SERVQUAL: A Multiple-Item Scale For Measuring Consumer Perceptions Of Service Quality", *Journal Of Retailing, Spring, Volume 64, Number 1, pp. 12-40.*

23. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A Multiple-Item Scale For Measuring Consumer Perceptions Of Service Quality. *Journal Of Retailing , Volume 64, Number 1*, 12-40.

24. Swan, John E. and I. Frederick Trawick (1981), "Disconfir-mation of Expectations and Satisfaction with a Retail Service," Journal of Retailing, 57 (Fall), 49-67

25. Zeithaml , Barry and Parasuraman (1993), The Nature and Determinants of Customer Expectations of Service, *Journal of the Academy of Marketing Science, Volume 21, Number 1, pages 1-12.*

26. Zeithaml Valarie A., Parasurarnan A. and Malhotra Arvind, (2002) Service Quality Delivery Through Web Sites: A Critical Review of Extant Knowledge, *Journal of the Academy of Marketing Science, Volume 30, No. 4, pages 362-375.*

27. Zeithaml, A. Parasuraman, and Arvind Malhotra (2000), "A Conceptual Framework for Understanding e-Service Quality: Implications for Future Research

and Managerial Practice," working paper, report No. 00- 115, Marketing Science Institute, Cambridge, MA