Internet Banking Service Quality and Its Impact On Customer Satisfaction In Indore District Of Madhya Pradesh

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ABSTRACT : *Competition and the constant changes in technology and lifestyles have changed the face of banking in India. From a technological and cost-driven standpoint it may seem quite logical for banks to shift as many banking activities online as possible. Banking industry has revolutionised the internet banking services with the help of technology. Internet banking has become one of the widely used banking services among Indian retail banking customers in recent years. Despite its attractiveness, customer satisfaction towards Internet banking service has become an issue due to stiff competition among the banks in India. Customer satisfaction is critically important for its impact on customer retention and firm profitability. Internet banking service quality and customer satisfaction are inarguably the two core concepts for the researchers. It has been analysed that internet banking service quality is a key issue to maintain customer satisfaction. As the development of a customer satisfaction model in Internet banking services context in India specially in Madhya Pradesh had not been addressed by past studies, this study attempts to develop a model based on service quality dimensions, with the purpose to investigate impact of service quality on customer satisfaction . The main objectives of this empirical study is to explore internet banking service quality factors and also analyze its impact on customer satisfaction through Multiple-Regression statistical techniques. A structured likert scale based questionnaire was prepared with the help of literature and filled by internet banking users of Indore district of Madhya Pradesh through survey method. Using factor analysis five dimensions for internet service quality were extracted and to analyze its impact on customer satisfaction regression method was used by the researcher. Rresearcher found that there is a positive impact of service quality dimensions on customer satisfaction. Regression measures have indicated that website ease of use, comfort, accessibility, are influential factors, whereas, confidence and responsiveness also have significant impact on satisfaction of the online customers.*

KEYWORDS : *Internet banking service quality, Customer satisfaction, Factor analysis and Regression.*

I.   INTRODUCTION

The quality of service has become as one of the major determinants of the customer satisfaction .Customer satisfaction is a critical issue for the success of any business. Service quality is the main indicator to measure the customer satisfaction. Service quality asserts that it had a direct influence on customer satisfaction and service quality is demonstrated to be an antecedent to satisfaction. The relation between Service quality and customer satisfaction are very important in business especially in service industry. In the modern competitive environments, delivering high service quality is the key for a sustainable competitive advantage. Customer satisfaction allows an organization or company to understand the key drivers that create satisfaction or dissatisfaction; and what is really driving their satisfaction during a service experience. Customer satisfaction always shows positive effect on an organization's profitability. Satisfied customers of any business repeat purchase, show brand loyalty, and give positive word of mouth, which increase company's value in the competitive market which reflects its result as profit. Consumer satisfaction is considered the primary intervening constructs in the area of service marketing because ultimately it leads to the development of consumer loyalty or re-patronization of a product or service. The objective of the study therefore is to study the explore internet banking service quality and find out their impact on consumer satisfaction in Indore District of Madhya Pradesh.

II.   LITERATURE REVIEW

Dogarawa Ahmad Bello (2005) examined and assessed the impact of e-banking services on customer satisfaction in the Nigerian banking industry. Data analysis was done using descriptive statistics and Chi-square test. It was found that customers enjoying e-banking services are not satisfied with the quality and efficiency of the services. Study suggested that banks should try to win customers' confidence by providing adequate security and ensuring good connectivity.Vanpariya and Ganguly(2010) examined that service quality is having a positive and significant correlation with customer satisfaction, positive word of mouth and loyalty intention.

Elangovan and Sabitha, (2011) in their empirical study found that there is no significant difference in the level of satisfaction of the respondents belonging to different age, education and occupation except income. Dharmalingam et al., (2011) stated that all the service quality attributes are positively correlated with customer satisfaction. Gopalakrishnan et al. (2011) determined that Service quality and customer satisfaction had a direct positive effect on customer''s retention intentions out of which Customer satisfaction is a stronger predictor for retention. Kumbhar (2011) examined the relationship between service quality and customers' satisfaction as well as satisfaction in internet banking service provided by the public and private sector banks in India. Using stratified judgmental sampling, sample of 190 customers was obtained. Kruskal-Wallis Chi Square tests, spearman's rho non-parametric correlation and Mann Whitney U test were performed. Results reveals that overall satisfaction of employees, businessmen and professionals are higher in internet banking service. Correlation test indicates that all dimensions are significantly correlated to overall customer satisfaction except responsiveness. Mann-Whitney U Test indicated that Private sector banks are providing better service quality of internet banking than public sector banks. E-Fulfillment, Responsiveness, Problem handling and Contact dimensions of internet banking service quality were differed in public and privates sector banks while other dimensions i.e., system availability, efficiency, security, easiness, convenience, cost effectiveness and compensation were same in public and privates sector banks.

Gupta and Bansal (2012) developed an instrument for measuring Internet banking service quality in India and also analyzed the impact of Internet banking service quality dimensions on the Overall Internet Banking Service Quality and customer satisfaction. To measure service quality they also developed scale of 22 items. Exploratory factor analysis resulted into five dimensions: Security/Privacy, Reliability, Efficiency, Responsiveness, and Site Aesthetics. Model was further validated through Confirmatory Factor Analysis. A survey was carried on a mixed sample of 1350 Internet banking customers of private sector, public sector and foreign banks in the Delhi Metropolitan Area. Results of multiple regression analysis revealed that security/Privacy dimension carry the maximum impact on the Overall Internet Banking Service Quality whereas customer satisfaction is most impacted by the Efficiency dimension as compared to other dimensions.Rangsan. Nochai and Titida. Nochai (2013) examined the impact of seven internet banking service quality dimensions on customer satisfaction using multinomial logistic regression analysis. A survey was done on customers who have been using Internet banking from October 2011 through December 2011 among top three banks in the Bangkok. Results showed that Safety reliability, Transactions efficiency, Customer support, Service security, Ease of use and Performance have a significant impact on customer satisfaction. Jasveen Kaur and Baljit Kaur (2013) determined the bank-wise comparison among the customers' usage of internet banking services and tried to evaluate consequent impact of the Internet Banking Service Quality on the Customer Satisfaction in India. One way Anova depicted that there is no significant difference in facilities determining the customers' usage of internet banking services of Public, Private and Foreign sector banks in India. Multiple-Regression analysis showed that responsiveness, security/privacy and site-aesthetic are the major factors that strongly influence the customer satisfaction of the online bank customers whereas Reliability and Efficiency are insignificant to customer satisfaction.

III.   OBJECTIVE
The objective of the study is:
- To examine the relationship between service quality and customer satisfaction in internet banking of Indore district of Madhya Pradesh.

IV.   METHODOLOGY
The present study is exploratory in nature. Type of data is primary data. In the present study, data was collected through the personal survey method. A structured likert based questionnaire was prepared to collect data in Indore district of Madhya Pradesh with the help of various literatures related to internet banking service quality. The questionnaire divided into two parts part A dealt with demographic information and part B dealt with service quality and satisfaction. The sample size was initially 1006, after normality test for outliers 673 data was retained for the factor analysis. Before applying regression, some outliers were identified with the help of Z-score and finally 601 data retained for the regression analysis. Initially factor analysis was used to obtain internet banking service quality dimensions with the help of SPSS and extracted 5 dimensions (website ease of use, comfort, accessibility, confidence and responsiveness) as internet banking service quality. Further Cronbach's Alpha Test of Reliability. Applying this test specifies whether the items pertaining to scale, each items are internally consistent and whether they can be used to measure the proposed phenomena e.g. Internet banking service quality.In order to identify the relationship between the independent variables i.e. website ease of use, comfort, accessibility, confidence and responsiveness and dependent variables as customer satisfaction,

researcher   proposed a model considering identified dimensions (Fig 1) and applied regression model to determine the significance level of the variables for the customer satisfaction in internet banking.
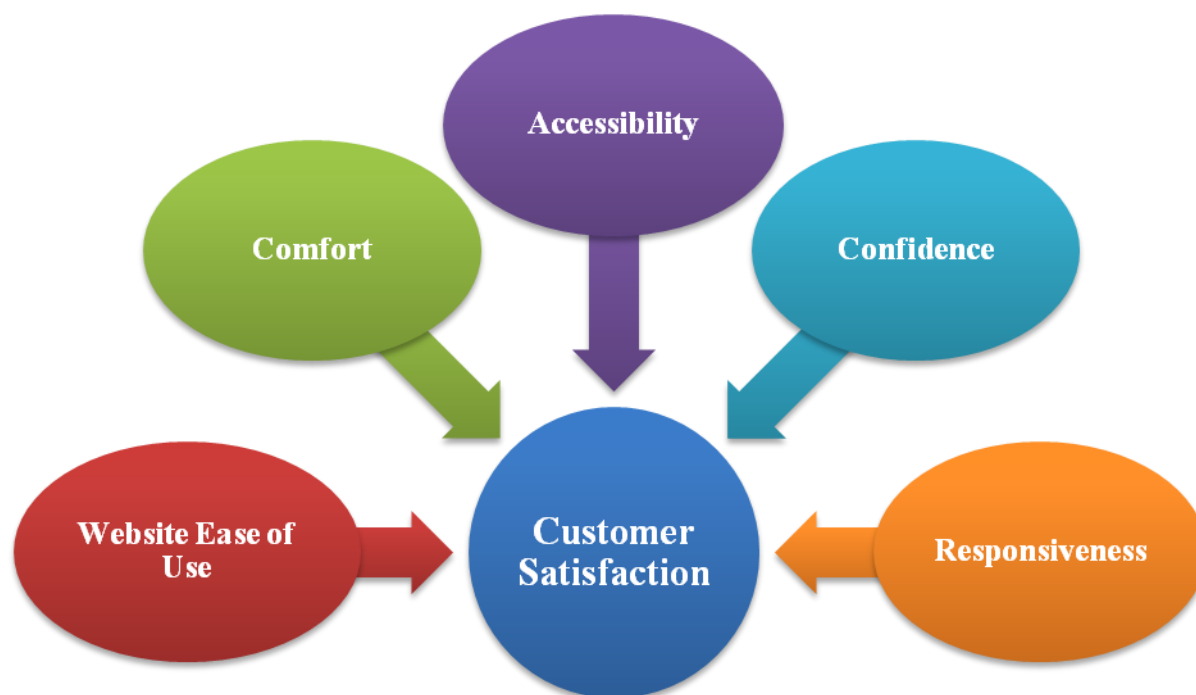
Figure 1 Proposed Model: Conceptual Framework of the Study

The basic model is as follows:
Internet Banking Customer Satisfaction = f (website ease of use, comfort, accessibility, confidence and responsiveness).
Basically,
IBCS= $\beta + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + U$
Where,
IBCS= Internet Banking Customer Satisfaction,
X_1= Website Ease of Use,
X_2= COMFORT,
X_3= ACCESSIBILITY,
X_4= CONFIDENCE
X_5= RESPONSIVENESS
There is β constant and β's (β_1, β_2, β_3, β_4 and β_5) are coefficients to estimate, and U is the error term.

V.   HYPOTHESIS
H1-Internet banking service quality dimensions have a positive association with customer satisfaction.
Hypothesis 1-1: The Website ease of use dimension has a positive association with satisfaction.
Hypothesis 1-2: The Comfort dimension has a positive association with satisfaction.
Hypothesis 1-3: The Accessibility dimension has a positive association with satisfaction.
Hypothesis 1-4: The Confidence dimension has a positive association with satisfaction.
Hypothesis 1-5: The Responsiveness dimension has a positive association with satisfaction.

VI.   DATA ANALYSIS AND RESULT
Factor analysis was performed on collected data and extracted five service quality dimensions namely Website ease of use, comfortable, accessibility, confidence and responsiveness. In factor analysis the Bartlett's Test of sphericity is 0.000, which meets the criteria of value lower than 0.05 in order for the factor Analysis to be considered appropriate. Furthermore, the result of the KMO measure of sampling adequacy is 0.880, which exceeds the minimum value of 0.6 for a good factor analysis. The reliability of 31 items of service quality is measured 0.940. Furthermore, to check impact of service quality dimensions on customer satisfaction,

regression analysis was performed. According to Zkimund, Babain & Griffin (2010) simple regression analysis and correlations are mathematically the same in many respects; however the correlation is an interdependence technique and regression is a dependence technique. The R square ranges from 0-1 and this shows how much of the dependent variable is explained by the independent variables (Burns & Bush, 2010). The higher the R square the stronger the association between the dependent variable and the independent variable (Burns & Bush, 2010). When performing regression analysis normality is not always required when analysing variables. However the results are slightly improved if the data is normally distributed (Tabachnick & Fidell, 2007). Multicollinearity should not exist because multicollinearity problems weaken the regression model (Pallant, 2007). Multicollinearity exists when there is a strong relationship between the independent variables. The independent variables must not correlate highly with each other, r value should not exceed than 0.9, an r value of above 0.9 indicates strong correlation which weakens the regression model (Pallant, 2007).A regression analysis was performed to test the relationship between the dependent variable (satisfaction) on the independent variables (Website ease of use, comfort, accessibility, confidence and responsiveness). The results are shown in **Table 6.1** and are as follows:

Table 6.1 Model Summary									
					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.815[a]	.664	.661	.57618350	.664	234.517	5	594	.000
a. Predictors: (Constant), responsiveness, comfort, weou, accessibility, confidence									
b. Dependent Variable: satisfaction									

Table 6.2 Customer satisfaction and service quality dimension							
	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	-.017	.024		-.739	.460		
Weou	.501	.025	.487	20.401	.000	.994	1.006
comfort	.453	.026	.422	17.696	.000	.994	1.006
accessibility	.318	.024	.317	13.284	.000	.992	1.008
confidence	.220	.026	.201	8.390	.000	.990	1.011
responsiveness	.226	.025	.216	9.010	.000	.987	1.013
a. Dependent Variable: satisfaction							
b. Adjusted R Square = 0.661 at .000 degree of freedom							
Mahalanobis. Distance = 17.5, Cook's Distance = 0.044							

The R square (coefficient of determination) value was 0.661 which means that the IBSQ dimensions accounted for 66.1% of the variance in satisfaction. Again, about 33.9% of the variance in satisfaction was due to reasons not related to the service quality dimensions considered in the model. The statistical findings show that all dimensions i.e. Website ease of use, comfort, accessibility, confidence and responsiveness were significant predictors of customer satisfaction. The strongest relationship were between the website ease of use with satisfaction, comfort with satisfaction and accessibility with satisfaction with the Beta value for website ease of use is 0.501, comfort is 0.453 and accessibility is 0.318.The outcome of Hypothesis 1-1 was that 'website ease of use' had a positive relationship with 'customer satisfaction'. The regression analysis showed website ease of use to be significant at the 0.000 level which is lower than the 0.05 confidence level for this study.The outcome of Hypothesis 1-2 was that 'comfort' had a positive relationship with 'customer satisfaction'. The regression analysis showed comfort to be significant at the 0.000 level which is lower than the 0.05 confidence level for this study.

The outcome of Hypothesis 1-3 was that 'accessibility' had a positive relationship with 'customer satisfaction'. The regression analysis showed accessibility to be significant at the 0.000 level which is lower than the 0.05 confidence level for this study.

The outcome of Hypothesis 1-4 was that 'confidence' had a positive relationship with 'customer satisfaction'. The regression analysis showed confidence to be significant at the 0.000 level which is lower than the 0.05 confidence level for this study.

The outcome of Hypothesis 1-5 was that 'responsiveness' had a positive relationship with 'customer satisfaction'. The regression analysis showed responsiveness to be significant at the 0.000 level which is lower than the 0.05 confidence level for this study.

Regression analysis of service quality dimensions on customer satisfaction in Indore district reveals that all of them carry a significant impact (Table 6.1 and 6.2). Therefore, results support hypothesis H1-1, H1-2, H1-3, H1-4 and H1-5. As all the VIF values are equal to 1, no multi-collinearity has been observed. To test for outliers the Cook's distance is less than 1 and the Mahalanobis distance must be less than 18.47. Value for Mahalanobis distance is 17.5 which is less than 18.47 and value for Cook's distance is 0.044 which is less than 1 which means that the assumption hasn't been violated. Website ease of use (ß=.501), Comfort (ß=.453) and Accessibility (ß=.318) are more important in comparison to other dimensions in influencing Customer Satisfaction. All the five dimensions together explain 66.1% variance in customer satisfaction.As far as this descriptive statistics is concerned, customer's satisfaction on Internet banking is above satisfactory level. The table also suggests that the most important factors on which the customers of internet banking are generally satisfied. As far as the mean values are concerned, customers are fairly satisfied on website ease of use, comfort and accessibility.Customer satisfaction is resulted from quick secured and easy navigated website; new technology which the bank is using, comfort of the customer is comes from always availability, easy language, convenient services provided by the banks. And service like need not to visit branch, availability of helpline etc. shows accessibility factor.

The overall regression model and its ANOVA are summarized as follows:

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	389.283	5	77.857	234.517	.000[a]
Residual	197.201	594	.332		
Total	586.484	599			
a. Predictors: (Constant), responsiveness, comfort, weou, accessibility, confidence					
b. Dependent Variable: satisfaction					

Table 6.3 ANOVA[b]

From the ANOVA Test (table6.3) the Sig. value 0.05 is greater than the calculated Sig. value 0.000. It reflects the null hypothesis at 5% level of significance. It means there was a significant correlation between dependent variable and independent variables. Therefore customer satisfaction level depends on quality dimension in Indore. The ANOVA table shown under table 6.3 depicting significant F values implies that the model and data are well fit in explaining customer satisfaction in internet banking.Based on the data found in the table 6.2 above, it can be interpreted that the independent variables such as website ease of use, comfort and accessibility have strong impact on customer satisfaction for internet banking;

From the above findings we can develop the following regression model:

IBCS= -0.017 +.501 X1+ .453X2 +.318 X3+.220X4 + .226X5
S.E. (.024) (.025) (.026) (.024) (.026) (.025)
T-values (20.401)** (17.696)** (13.284)** (8.390)** (9.010) **
R square (Adj.) = .661, F = 234.517 **= Significant at 99% level

Where, IBCS= internet banking customer satisfaction on X1 = Website ease of use X2= Comfort X3 = Accessibility, X4 = Confidence and X5= Responsiveness.

Coefficient analysis shows the relationship between dependent variable and each independent variable.

Here, X1 (Website ease of use) = 0.501 i,e, 100% change in website ease of use leads to 50.1% change in internet banking customer satisfaction level.

X2(Comfort) = 0.453 i,e, 100% change in technology leads to 45.3% change in internet banking customer satisfaction level.

X3 (Accessibility) =0.318 i,e, 100% change in security leads to 31.8 % change in internet banking customer satisfaction level.

X4 (Confidence) = 0.220 i,e, 100% change in technology leads to 22% change in internet banking customer satisfaction level.

X2(Responsiveness) = 0.226 i,e, 100% change in technology leads to 22.6% change in internet banking customer satisfaction level.

From the above discussion it is clear that though all internet banking service quality dimension shows impact on consumer satisfaction but website ease of use, comfort and accessibility are most important dimensions.

VII. CONCLUSION

This research seeks to make an original contribution to knowledge by investigating the impact of internet banking service quality on customer satisfaction in Indore district of Madhya Pradesh. Furthermore, the study shows that Website ease of use, comfort, accessibility, confidence and responsiveness are the major integral determinants of internet banking services quality. The empirical results show that there is a direct relationship between internet banking service quality dimensions and customer satisfaction in the banking industry. An understanding of the factors identified in this study allows bank managers and policy makers to direct efforts and resources in the most effective and efficient way to increase bank business in the long run and encourage new customers to adopt internet banking.

REFERENCES

[1]   Burns, A. & Bush, R. (2010) *Marketing Research*. 6th edn. Boston: Pearson.
[2]   Dharmalingam, S., Ramesh, R. And Kannan, K.V. (2011). *Investigating the Service Quality Dimensions to Customer Satisfaction and Loyalty of New Private Sector Banks in Tamilnadu –An Empirical Study*. Research journal of Social Science and Management, 4 (1), pp. 37-46.
[3]   Dogarawa, A. B. (2005). *The impact of E-banking on customer satisfaction in Nigeria*. University Library of Munich, Germany.
[4]   Elangovan, R., & Sabitha, K. (2011). *Customers perception towards internet banking services-A Study with reference to Pondicherry Territory.* Sankhya-International Journal of Management and Technology, 2(2), 60-63.
[5]   Gopalakrishnan, J., Mishra, B. B., Gupta, V. K. And Vetrivel, A. (2011). *The Impact of Service Quality and Customer Satisfaction on Customer Retention in the Indian Banking Industry: An Empirical Analysis*. Research Journal of Social Science and Management, 1 (3), pp. 52-68.
[6]   Gupta, K. K., & Bansal, D. I. (2012). *Development Of An Instrument To Measure Internet Banking Service Quality In India.* International Refereed Research Journal,Vol.– III, Issue 2(2). , 11-25
[7]   Kaur, J., & Kaur, B. (2013). *Determining Internet Bnaking service quality & customer satisfaction in India.* In AIMS international conference on management Jan.
[8]   Kumbhar, V. M. (2011). *Determinants of internet banking adoption: an empirical evidence from Indian banking.* Indian Journal of Commerce and Management Studies, 2(4), 15-25.
[9]   Nochai, R., & Nochai, T. (2013). *The Impact of Internet Banking Service on Customer Satisfaction in Thailand: A Case Study in Bangkok*. International Journal of Humanities and Management Sciences (IJHMS) Volume, 1.
[10]   Pallant, J. (2007) *SPSS Survival manual: A Step by Step Guide to Data Analysis using SPSS for Windows*. 3rd edn. Berkshire: mcgraw Hill: Open University Press.
[11]   Tabachnick, B. & Fidell, L. (2007) *Using Multivariate Statistics*. 5th edn. Boston: Pearson.
[12]   Vanpariya, B., & Ganguly, P. (2011). *Servqual Versus Servperf: An Assessment from Indian Banking Sector*. Available at SSRN 1783471.
[13]   Zikmund, W., Babin, B., Carr, J. & Griffin, M. (2010) *Business Research Methods.* 8th edn. United Kingdom: South-Western, Cengage Learning.