MEASURING CUSTOMER EXPERIENCE TOWARDS INTERNET BANKING SERVICE: A STUDY OF BANKS IN INDIA

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ABSTRACT

Indian banking sector act as a backbone of the Indian economy. Most of the banks are offering contemporary services to its customers. Every bank is trying to maximize its profit by offering superior online services. An empirical study has been conducted to check the perception and satisfaction level of the customers towards internet banking. Study concludes that some demographic features like age, occupation, qualification are having significant impact on the perception level of respondents towards online services. There is significant association between superior online banking services and customer satisfaction.

Key words: Perception, Satisfaction, Service

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1. INTRODUCTION

Indian banking sector consists of 27 public sector, 22 private sector, 44 foreign banks, 56 regional rural banks, 1589 urban cooperative banks, 93550 rural cooperative banks.(IBEF, 2018).

This sector has seen a tremendous change in the last decade with the introduction of information technology(Dai, 2018). Banks like HDFC are taking vital steps in keeping our environment clean and green. It has launched mobile banking, internet banking, offering online account statements, Insta alert etc. Traditional banking system is now shifting towards digital banking (Vinay Bagri, 2018).

Services can be seen as an activity/process that are tangible, homogeneous, inseparable, participation by customers (Shanker, 2002). Companies that are in the process of offering high perceived service quality (SERVQUAL) do have a competitive edge over its competitors.(Hamzah, Lee, & Moghavvemi, 2017)

2. PERCEPTION

Perception means “the consciousness of particular material things present to sense” Angell (1910). The senses are divided into five major groups viz Vision, hearing, touch, balance, taste/smell Mather (2006). From psychology perspective, it means mental organization and interpretation of sensory information Ingold (2002).

3. SATISFACTION

Customer satisfaction is a customers’ post consumption evaluation of a product or service Mittal and Frennea (2010). SERVQUAL is considered to be the most important factor having a positive impact on the performance of company and enhancing customer satisfaction(Caruana and Ewing (2010).

4. REVIEW OF LITERATURE

Internet banking is imperative for any bank to reduce the overall operating cost. This can lead to higher customer satisfaction and retention (Nui Polatoglu and Ekin (2001). Authors have concluded that there is a significant relationship between online customer service quality, online information system quality, banking service product quality, overall internet banking service quality and customer satisfaction (Rod, Ashill, Shao, and Carruthers (2009). Service quality can be divided into three categories i.e. customer service quality, banking service product quality and online system quality. Factors like Reliability, responsiveness, easy access and high accuracy are considered imperative for satisfaction (Jun,Cai 2001). Internet banking can lead to high customer convenience & flexibility (Singhal and Padhmanabhan (2008). Ease of usage decides the base for acceptance or rejection of internet banking (Wang, Wang, Lin, and Tang (2003). Perceived risk associated with the bank website can affect the consumer adoption of internet banking (Ankit, singh 2012).

5. RESEARCH METHODOLOGY

The present study aims at measuring the customer perception and satisfaction level towards online banking services. A non-probability convenience sampling is used. Responses are collected from 160 respondents living in different cities in Punjab, India. Total 4 banks are shortlisted for the research viz. HDFC Bank, Axis Bank, Punjab National Bank and Punjab & Sind Bank. 5 point likert scale (5- Highly satisfied, 4- Satisfied, 3- Neutral, 2- Dissatisfied, 1- Highly Dissatisfied) is used to collect the data. An open ended questionnaire is distributed among the respondents. Each respondent is asked to tick at the appropriate response. The validity of the questionnaire is checked by the managers/intellectuals. Data is analysed through SPSS. Regression analysis, ANOVA, Factor analysis has been used to analyse the data.

Table 1 Demographics

Profile	Description	Frequency	Percent
Bank	Axis Bank	38	23.8
	PNB	43	26.9
	HDFC Bank	41	25.6
	P&S Bank	38	23.8

Duration	<3 yrs	35	21.875
	3-6 yrs	77	48.125
	6+	48	30
Gender	Female	49	30.625
	Male	111	69.375
Marital Status	Married	107	66.875
	Unmarried	53	33.125
Age	18-25	6	3.75
	26-39	39	24.375
	40-55	64	40
	56-65	37	23.125
	>65	14	8.75
Qualification	Undergraduate	26	16.25
	Graduate	89	55.625
	Post Graduate	45	28.125
Occupation	Business	74	46.25
	Service	86	53.75

Source: Primary data

The Demographic Impact is Measured on the Following Variables

- (FT) Online Fund transfer
- (OI) Online Investing
- (BP) Online Bill payment
- (WND) Website never down
- (ITP) Online Income Tax Payment
- (OFDB) Online FD Booking
- (SP) Online Stop Payment
- (OFB) Online FD Break
- (EOC) Easy Online Content
- (OI) Online Information available
- (FL) Faster Login
- (ESD) E-statement download
- (OTP) Online Third party Fund Transfer

6. RELIABILITY ANALYSIS

Reliability test using Cronbach's Alpha is conducted to confirm the internal consistency of the responses. The value of Cronbach's Alpha is .748 which falls within the range of .7 to 1. This fulfills the condition of reliability.

7. HYPOTHESIS

H₀₁: There is no significant impact of demographic features on perception level of respondents towards internet banking.

In order to test above mentioned hypothesis, we have tested following hypothesis using Two way ANOVA.

Ho: There is no significant impact of *gender* on perception level of respondents towards internet services.

The probabilities for FT, OI, BP, WND, ITP, OFDB, SP, OFB, EOC, OI, FL, ESD, OTP at F (1, 158) df(1) are .356, .510, .206, .529, .536, .414, .796, .381, .760, .625, .560, .699, .257 and these values are >0.05 , therefore at 5% level of significance, the null hypothesis is accepted. Hence, we can conclude gender as demographic factor has no significant impact on perception level of respondents towards various online services.

Ho: There is no significant impact of *marital status* on perception level of respondents towards internet services.

The probabilities for FT, OI, BP, WND, ITP, OFDB, SP, OFB, EOC, OI, FL, ESD, OTP at F (1, 158) df(1) are .256, .410, .267, .325, .521, .40, .706, .321, .660, .615, .260, .199, .121. These values are >0.05 , therefore at 5% level of significance, the null hypothesis is accepted. Hence, we can conclude marital status as demographic factor has no significant impact on perception level of respondents towards various online services.

Ho: There is no significant impact of *duration of association with bank* on perception level of respondents towards internet services.

The probabilities for FT, OI, BP, WND, ITP, OFDB, SP, OFB, EOC, OI, FL, ESD, OTP at F (2, 157) df (2) are .248, .367, .561, .294, .952, .372, .761, .703, .616, .709, .442, .385, .521 and these values are >0.05 , therefore at 5% level of significance, the null hypothesis is accepted. Hence, we can conclude that *duration of association* has no significant impact on perception level of respondents towards various services mentioned above.

Ho: There is no significant impact of *age* on perception level of respondents towards internet services.

The probabilities for FT, OI, BP, WND, ITP, OFDB, SP, OFB, EOC, OI, FL, ESD, OTP F (4, 155) df(4) .001, .043, .031, .036, .001, .021, .040, .046, .042, .021, .026, .019, .035 and these values are <0.05 , therefore at 5% level of significance, the null hypothesis is rejected. Hence, we can conclude that age factor has significant impact on perception level of respondents towards various services mentioned above.

Ho: There is no significant impact of *qualification* on perception level of respondents towards internet services.

At F (2, 157) df(2), the probabilities for FT, OI, BP, WND, ITP, OFDB, SP, OFB, EOC, OI, FL, ESD, OTP are .010, .003, .001, .006, .022, .011, .030, .016, .032, .041, .014, .021, .013 and these values are <0.05 , therefore at 5% level of significance, the null hypothesis is rejected. Hence, we can conclude that qualification factor has significant impact on perception level of respondents towards various services mentioned above.

Ho: There is no significant impact of *occupation* on perception level of respondents towards internet services.

At F (1, 158) the p values for FT, OI, BP, WND, ITP, OFDB, SP, OFB, EOC, OI, FL, ESD, OTP are .016, .017, .006, .021, .023, .013, .025, .006, .008, .007, .022, .049, .046 and these values are <0.05 , therefore at 5% level of significance, the null hypothesis is rejected. Hence, we can conclude that occupation factor has significant impact on perception level of respondents towards various services mentioned above.

Hypothesis: 2

Ho 2: There is no significant association between Online banking services experience & customer satisfaction

Factor analysis has been conducted over the 13 variables. Before going for the detail analysis, KMO and Bartlett's test has been conducted to measure the sample adequacy and internal consistency. Small values of the KMO statistics indicate that the correlation between pairs of variables cannot be explained by other variables and factor analysis may not be appropriate. A value greater than .6 is acceptable. Value of .801 indicates that we can go ahead with factor analysis. A Bartlett's test of Sphericity was conducted and taking into the account 95% level of significance or .05, the p- value (Sig.) received is .000 which is less than .05. Therefore the factor analysis can be used. As $p < \alpha$, so the null hypothesis that correlation matrix is an identity matrix is rejected and alternate hypothesis is accepted showing that there is a statistical significant relationship between the variables.

Table 2 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.801
Bartlett's Test of Sphericity	Approx. Chi-Square	521.266
	Df	78
	Sig.	.000

Extraction value tells us the proportion of variance of each variable that can be explained by a factor. We have high number of extraction values. This gives us the indication to go ahead with factor analysis.

Table 3 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.966	30.505	30.505	3.966	30.505	30.505	3.714	28.572	28.572
2	1.707	13.133	43.638	1.707	13.133	43.638	1.665	12.810	41.382
3	1.080	8.307	51.946	1.080	8.307	51.946	1.373	10.564	51.946
4	.962	7.398	59.343						
5	.946	7.274	66.617						
6	.847	6.512	73.129						
7	.687	5.286	78.415						
8	.643	4.944	83.359						
9	.565	4.344	87.703						
10	.480	3.694	91.398						
11	.450	3.458	94.856						
12	.356	2.735	97.590						
13	.313	2.410	100.000						

Extraction Method: PrincipalComponent Analysis.

Component column in the above table tells us the number of variables (13) used for factor analysis. The eigen value reflect the variance in the factors. Component with the eigen value of

more than 1 is retained. A total number of 3 factors have originated where the first factor display most variance along with the high eigen value. The next factor will account for as much of the left over variance as it can and the same will continue till the last factor. In this research total number of 3 factors explained 51% of variance under extraction sums of squared loadings.

Table 4 Rotated Component Matrix

	Component		
	1	2	3
Fund transfer	.622		
Investing	.633		
Bill payment	.638		
Website never down			-.768
Income Tax Payment	.511		
FD Booking	.721		
Stop Payment			.567
FD Break	.806		
Easy Online Content		.532	
Information	.749		
Faster login	.521		
Download statement		.810	
Third party FT		-.730	

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

The Rotated Factor Matrix represents the rotated factor loadings, which are the correlations between the variables and the factors. In the above rotated component matrix, we have suppressed all the loading less than .4 and this is the reason for the blank spaces for many of the loadings. Percentage of variance explained under Rotation Sums of Squared Loadings:

Factor-1 Core online Services 28.572

Factor-2 Online Information 12.810

Factor-3 Support Services 10.564

8. OVERALL SATISFACTION

Now we have ended up with three factors, we will measure its impact on the satisfaction level of the respondents. In order to measure the same, we have implemented multiple linear regression analysis. We have calculated the mean scores of the above mentioned three factors. These three factors have been taken as an independent variables and overall satisfaction level of respondents is taken as dependent variable. Overall Satisfaction level has been measured by using 5 point Likert scale (1 poor, 2 poor, 3 fair, 4 good, 5 excellent).

Table 5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.699 ^a	.489	.479	7.148	.754	1080.772	3	156	.000

a. Predictors: (Constant), REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1

This model predicts overall customer satisfaction level. R denotes the correlation between online services & satisfaction level. In our case, R = .699. Since this is a very high correlation, our model predicts satisfaction rather precisely.

Table 6 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.435	.008		410.194	.000
	Core online Services F1	.459	.008	.938	54.685	.000
	Online Information F2	.083	.008	.170	9.888	.000
	Online Support Services F3	.104	.008	.213	12.412	.000

a. Dependent Variable: OVERALL SATISFACTION

$$Y = 3.435 + .459 \times F1 + .083 \times F2 + .104 \times F3$$

The b coefficients tell us how many units of overall satisfaction increases for a single unit increase in each predictor. If we see the impact of independent variables individually, we observe that first factor i.e. 'Core online Service' is having highest beta coefficient (.938) and t value (54.685) that are statistically significant at 5% level (95% level of confidence). Therefore, this factor is showing strongest positive impact on overall customer satisfaction followed by online information and support services. One thing to note here is that all b coefficients are positive numbers. This means that all the factors are associated with overall satisfaction. There is a significant relationship between Online banking services experience & customer satisfaction.

9. FINDINGS & CONCLUSION

After a thorough study conducted in Punjab, we can say that there is a strong association between customer overall satisfaction and online banking services offered by the banks. Making any changes in the independent factors like core online services, online information, and online support services will positively impact the overall satisfaction level. Customers feel comfortable in doing the banking transactions in online mode. Demographic factors like age, occupation and qualification are significantly impacting the perception level of customers towards online services. Customers living in this particular region are satisfied with the services offered by the banks. Banking personnel always motivate the customer to start adopting the contemporary banking services. Various online/offline sessions are conducted to inform the customers about the benefits of using online services.

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