

Online Banking Adoption among Rural Customers with special reference to Indian Bank, Kanchipuram

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Abstract

Today commercial banks are operating extensive branches in rural areas but the customers in the rural banks are not apparently pre-eminent. The customers in the rural banks are reluctant to move towards online banking due to risk factor, lack of knowledge, inertia and infrastructure. This research takes an attempt to explore the factors for non adoption of online banking among customers in rural areas. The population taken for the study is Indian Bank customers in rural kanchipuram. Data were collected through interview by adopting convenience sampling. The tools applied for the research is Exploratory Factor Analysis and Correlation. Data were analyzed through SPSS 21.

Keywords: Online Banking, Indian Bank and EFA

Introduction

Now a days there is tough competition among commercial banks and banking system is moving towards online banking with quality service. Internet Banking is automated delivery of banking service and products directly to the user through electronic forms. (Daniel, 1999, Sathye, 1999). Online banking helps the customers to handle account and transaction themselves. Singh, Manjit (2012) "E-banking is one of the emerging trends in the Indian banking and is playing a unique role in strengthening the banking sector and improving service quality. It has

enabled 103 the banks to handle the payments electronically and inter-bank settlement faster and in large volumes.” Potadar et. al (2013) identified some of the factors for not using internet banking in rural are lack of awareness, lack of technology knowledge, fear to operate, inability to adopt changes, economically unsound.

Literature Review

Several research has been carried out to understand the adoption of internet banking. The internet based banking services is purely human computer interface and interactions with high level of self services. Uppal (2008) focused the study on modern banking services through the adoption of ebanking for effective delivery of banking services to the customers. Vijay M. Kumbhar (2011) identified the factors such as service quality, perceived value and brand perception affecting customer’s satisfaction of e-banking service of Indian Bank. The result reveals that perceived value, cost effectiveness, brand perception, security, responsiveness, convenience, easy to use and problem handling are the important factors affecting customer satisfaction in e-banking. Manjit (2012) said that e-banking is in growing trend in Indian banking system because it strengthening the banking sector by improving service quality. Nishi & Sharma (2012) from the study identified that rural customers are quite satisfied with convenience, accuracy of transactions and updation of platform. Potadar et. al (2013) identified some of the factors for not using internet banking in rural are lack of awareness, lack of technology knowledge, fear to operate, inability to adopt changes, economically unsound.

Statement of the problem

Indian Bank is one of the nationalized banks and it is pioneer in computerization. It also provides most of the Internet Banking products and services to the customers. In Indian Bank, Kancheepuram, only 5.8% of the Savings Bank account holders are availing Internet Banking.

Need for the Study

The decision to provide Internet Banking is currently perceived as vital for customer retention and maintaining competitive advantage in the banking industry. For customer retention and maintaining competitive advantage, bank has to know about their potential customers' demographic characteristics. This will help the bank to offer the products and services according to customers' specific requirements.

Objectives of the Study

1. To find out the reason for Non-Adoption of online banking.
2. To ascertain the relationship between Inertia and Non-Adoption of online banking.

Limitations of the Study

1. Due to time constrains only 150 customers were surveyed.
2. Even though there are many factors which may influence the adoption of online banking only seven factors like Risk, No Perceived Need, Lack of Knowledge about the Services, Inertia, Inaccessibility, Pricing Concerns and Infrastructure were used.

Research Methodology

This empirical research study based on descriptive research design was undertaken to understand the adoption of internet banking among Indian bank customers at Kanchipuram Town. The sample size 150 was chosen through convenience based. A structured questionnaire

was administrated for the study purpose. The questionnaire comprised of two parts. The first part of the questionnaire comprised question about the demographic background of respondents like their age, gender, educational background, occupation. The second part of questionnaire comprised questions about internet banking adoption factors such as “Non Adoption of Online Banking”, “Inertia”, “Lack of Knowledge”, “Inaccessibility”, “Infrastructure”, “Pricing” and “No Perceived need”. The questions were made with likert scale from strongly disagree (1), disagree (2), neither disagree nor agree (3), agree (4) and strongly agree (5).

Reliability Testing

Cronbach's Alpha is designed as a measure of internal consistency of items in the questionnaire. It varies between zero and one. The closer alpha is to one, the greater the internal consistency of the items in the questionnaire. Total number of questions or items in the questionnaire is 20 including 13 testing variables or LIKERT scale variables and 6 items related to demographic variables. Hence “N” of items in the below Cronbach’s Alpha test is 13.

Cronbach’s alpha test was performed to check the reliability of questions or items. The above tables display several results obtained. The Cronbach’s alpha test was performed and it resulted in an overall score of 0.707 indicating internal consistency of the items.

Table 1

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.707	.709	13

Source: Computed Primary Data

Correlations

Correlation Analysis is a measure of association between two continuous variables. Correlation measures both the size and direction of relationships between two variables. Below table describes a detailed correlation analysis with various variables such as “Non Adoption of Online Banking”, “Inertia”, “Lack of Knowledge”, “Inaccessibility”, “Infrastructure”, “Pricing” and “No Perceived need”. From the below correlation matrix, Non Adoption of Online Banking is having a significant correlation with “inertia”. Further it is strongly correlated with infrastructure. “Lack of Computer Knowledge” is having a negative correlation with “Inertia”. “Pricing” is having a significant correlation with inaccessibility. “Risk” is having a significant correlation with “No Perceived Need”.

Table 2

Correlations			
		NON ADOPTION OF ONLINE BANKING	INERTIA
NON ADOPTION OF ONLINE BANKING	Pearson Correlation	1	.477**
	Sig. (2-tailed)		.000
	N	150	150
INERTIA	Pearson Correlation	.477**	1
	Sig. (2-tailed)	.000	
	N	150	150
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Computed Primary Data

Table 3

Correlations			
		RISK	NP
RISK	Pearson Correlation	1	.325**
	Sig. (2-tailed)		.000
	N	150	150
NP	Pearson Correlation	.325**	1
	Sig. (2-tailed)	.000	
	N	150	150
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Computed Primary Data

Table 4

Correlations			
		LACK OF KNOWLEDGE	INERTIA
LACK OF KNOWLEDGE	Pearson Correlation	1	-.079
	Sig. (2-tailed)		.337
	N	150	150
INERTIA	Pearson Correlation	-.079	1
	Sig. (2-tailed)	.337	

Correlations			
		LACK OF KNOWLEDGE	INERTIA
LACK OF KNOWLEDGE	Pearson Correlation	1	-.079
	Sig. (2-tailed)		.337
	N	150	150
INERTIA	Pearson Correlation	-.079	1
	Sig. (2-tailed)	.337	
	N	150	150

Source: Computed Primary Data

Table 5

Correlations			
		INACCESSIBILITY	PRICING
INACCESSIBILITY	Pearson Correlation	1	.250**
	Sig. (2-tailed)		.002
	N	150	150
PRICING	Pearson Correlation	.250**	1
	Sig. (2-tailed)	.002	
	N	150	150
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Computed Primary Data

Table 6

Correlations			
		INFRASTRUCTURE	NON ADOPTION OF ONLINE BANKING
INFRASTRUCTURE	Pearson Correlation	1	.575**
	Sig. (2-tailed)		.000
	N	150	150
NON ADOPTION OF ONLINE BANKING	Pearson Correlation	.575**	1
	Sig. (2-tailed)	.000	
	N	150	150
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Computed Primary Data

Factor Analysis

KMO- Bartlett's test which is a measure of sampling adequacy was performed to test the eligibility of the data. The KMO value of 0.689 >0.5 was observed indicating multivariate normality among variables. Since the significance value observed was less than 0.005, factor analysis was performed subsequently. Factor analysis was used to reduce a large number of variables resulting in data complexity to a few manageable factors. Factor analysis is a statistical approach that is used to analyze interrelationships among a large number of variables and to explain these variables in terms of a few dimensions (factors).

Table 7

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.689
Bartlett's Test of Sphericity	Approx. Chi-Square	874.209
	df	78
	Sig.	.000

Source: Computed Primary Data

Explanation of Total Variance**Table 8**

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	3.464	28.864	28.864	3.464	28.864	28.864	2.980	24.832	24.832
2	2.598	21.653	50.516	2.598	21.653	50.516	2.111	17.594	42.426
3	1.485	12.378	62.894	1.485	12.378	62.894	1.839	15.325	57.751
4	1.173	9.777	72.671	1.173	9.777	72.671	1.790	14.920	72.671
5	.822	6.852	79.523						
6	.568	4.731	84.254						

7	.531	4.425	88.679						
8	.508	4.237	92.916						
9	.364	3.033	95.949						
10	.209	1.743	97.692						
11	.154	1.286	98.977						
12	.123	1.023	100.000						
Extraction Method: Principal Component Analysis.									

Source: Computed Primary Data

Extraction Method-Principal Component Analysis

To find the total variance, principal component extraction method was used. Factors Since the initial number of factors and the number of variables used were found to be equal, all 13 factors were retained. Only the first eleven factors are retained since their Eigen value found was greater than one.

Initial Eigen values

Eigen values represent the variances of the factors. In the above table, total column provides the Eigen values. The first factor will always account for the maximum variance and the next factor will account for lesser variance compared to the first factor as observed and so on. Hence each successive factor will account for lesser and lesser variance.

Component Matrix

Table 9

Component Matrix^a				
	Component			
	1	2	3	4
The security features are adequate enough to operate	-.349	-.007	.315	.649
The privacy of the customers are not compromised	.434	.265	.436	-.445
I am obsessed / habituated with branch banking	.551	.458	.476	-.061
Proximity of my residence favors for branch banking	.540	.387	.532	.030
Lack of computer knowledge	.686	-.585	.020	.087
Lack of English knowledge	.668	-.648	.030	-.084
Lack of product and service knowledge	.659	-.627	-.030	-.117
Lack of motivation	.416	.611	-.448	-.218
Inadequate promotional strategy	.353	.540	-.557	-.087
Internet connectivity has become costly	.431	-.376	-.295	.157
Lacking the human touch	.599	.348	.065	.478
Transaction (NEFT) through Internet banking is time consuming	.603	.294	-.284	.461
Extraction Method: Principal Component Analysis.				
a. 4 components extracted.				

Source: Computed Primary Data

Rotated Component Matrix

In the below table the factors were mapped to various components based on factor loadings as part of rotated component matrix. The principal component analysis is a method of factor extraction used by SPSS software. The principal component matrix indicates the component matrix which is rotated using the Varimax rotation technique which further provides the rotated component matrix. Rotation of factors helps in the better interpretation of factors.

Table 10

Rotated Component Matrix^a					
Sl. No	Factors	Component			
		1	2	3	4
1	Lack of English knowledge	.927			
2	Lack of product and service knowledge	.912			
3	Lack of computer knowledge	.884			
4	Internet connectivity has become costly				
5	I am obsessed / habituated with branch banking		.813		
6	Proximity of my residence favors for branch banking		.794		
7	The privacy of the customers are not compromised		.760		
8	Lack of motivation			.813	
9	Inadequate promotional strategy			.768	
10	The security features are adequate enough to operate				
11	Transaction (NEFT) through Internet banking is time consuming				.787
12	Lacking the human touch				.759
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 6 iterations.					

Source: Computed Primary Data

The first factor in the rotated component matrix is observed to be heavily loaded with Lack of English Knowledge favoring the reason for non-adoption of online banking. With a factor loading value of 0.927 which is observed to be the highest, the first factor represents Lack of English Knowledge favoring the reason for non-adoption of online banking.

Since the second factor is observed to be heavily loaded with “Lack of product and service knowledge (.912)”, “Lack of computer knowledge (.884)”, “ Proximity of my residence favors for branch banking (.865)”, “ The privacy of the customers are not compromised (.813)”, “I am obsessed/habituated with branch banking (0.811)”, “Transaction (NEFT) through Internet banking is time consuming (.850)”, “Lack of motivation(.794)”, “Inadequate promotional strategy (.760)” “Internet connection is very slow(.865)”, “Lacking the human touch (.759)”.

Factor Loadings Based On Factor Analysis

In the below table, mapping is done for all 4 factors with factor loadings which are mapped to question numbers in the survey questionnaire.

Table 11

Sl. No	Factor	Factor	Factor loading
1	Lack of Knowledge about the Services	Lack of English knowledge	.927
		Lack of product and service knowledge	.912
		Lack of computer knowledge	.884
2	No Perceived Need and Risk	I am obsessed / habituated with branch banking	.755
		Proximity of my residence favors for branch banking	.865
		The privacy of the customers are not compromised	.813
3	Inertia	Lack of motivation	.794
		Inadequate promotional strategy	.760
4	Infrastructure	Transaction (NEFT) through Internet banking is time consuming	.787
		Lacking the human touch	.759

Source: Computed Primary Data

Conclusion

This study provides information about the demographical characteristics, risk, no perceived need, lack of knowledge about the services, inertia, inaccessibility, pricing concerns, infrastructures of the respondents who do not prefer internet banking. The banking may be able to influence their account holders to use internet banking if they implement the suggestions provided in this study. This will help the bank to lure more customers. The bank will be able to compete and survive in the today's competitive environment.

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