A STUDY ON FACTORS AFFECTING ADOPTION OF INTERNET BANKING IN INDIA

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Abstract

This paper analyses the factors that influence the adoption of internet banking among Indian consumer. Internet banking represents an important innovation in the banking sectors. The ability to carry out banking transactions through the internet has empowered customers to execute their financial transactions within the comfort of their homes. Internet can be considered a remarkable development in the banking sectors. The objective of this paper is to identify the factors influencing the adoption of online banking among consumer. A survey was conducted using questionnaire and the sample consist of 100 users of Internet banking. The results indicate that security provided by banks is the first factor that are being considered by internet banking user followed by Perceived Ease of Use, Support by Bank & Government. Usefulness of internet has higher impact on adoption rate.

Key Words: *Internet Banking, Factors Affecting, Indian Consumer*
JEL Classification: *E5*

Introduction

E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. An Internet banking customer accesses his or her accounts from a browser— software that runs Internet banking programs resident on the bank's World Wide Web server, not on the user's PC.

Internet Banking has several advantages over traditional banking which makes operating a bank account simple and convenient. Internet banking allows you to conduct various transactions using the bank's website and offers several advantages. Some of the advantages of internet banking are Convenience, automatic funding of accounts from long established bank accounts via electronic funds transfers, Ease of Monitoring, Ease of Transaction, Unlimited Service Day and Night and Easy Way of Payment.

Review of Literature

Alain et.al (2010) : They found that perceived usefulness, trust and government support were Examined to determine if these factors are affecting online banking adoption. The results

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showed that perceived usefulness, trust and government support all positively associated with the intention to use online banking in Vietnam. Contrary to the technology acceptance model, perceived ease of use was found to be not significant in this study.

Suki (2010) : This paper makes a contribution to Internet Banking literature by providing insights on the factors that affect Internet banking adoption. The results hint that information about Internet banking services and its benefits are a critical factor influencing the adoption.

Kesseven, Sawkuk and Boopen (2007) : They have identified the factors affecting the adoption of internet banking in Mauritius. It was found that the most significant factor was ease of use and that other important elements featured reluctance to change, trust and Relationship in banker cost of computers, internet accessibility, convenience of use, and security concerns.

Nicolette (2002) : This paper aimed at examining the drivers of the adoption of the Internet banking, in order to understand its role with respect to the traditional banking activity and to offer a comprehensive picture of the diffusion of such a technology within the sector.

Mingfeng, Henry, Joseph (2011) : They combine propensity-score matching and difference-in-differences methods to study how the adoption of Internet banking affects bank performance. Contrary to common wisdom and several previous studies, they find only modest evidence that Internet banking adoption improves bank performance. Additional analyses suggest that younger banks and banks that are earlier adopters are more likely to enjoy the benefits of Internet banking.

Sathye (1999) : They quantify the factors affecting the adoption of Internet banking by Australian consumers. The sample for this survey was drawn from individual residents and business firms in Australia. Shows that security concerns and lack of awareness about Internet banking and its benefits stand out as being the obstacles to the adoption of Internet banking in Australia. Suggests some of the ways to address these impediments. Further suggests that delivery of financial services over the Internet should be a part of overall customer service and distribution Strategy.

Song (2010) : This study based on the TAM, integrating trust perception and perceived risk to predict the user intention. And this study extended the adoption model by focusing on quality's effects on customers' perception about the internet banking. A comprehensive research model was developed and empirically examined. Results of the data analysis strongly support the model as well as 14 of the 16 proposed hypotheses.

Research Objective

The primary objective of the study is to identify the factors that affect the adoption of internet banking in India.

Research Methodology

The study is descriptive in nature. To study the factors responsible for using Internet banking, survey was conducted and data collected using non-probability convenient sampling method. To get the responses, we have used questionnaire as a research tool. The measurement items were adapted from Alain Y-Loong C, et.al (2010) the five-point Likert scale, ranging from 1 – strongly disagree to 5 – strongly agree was used for the questions to indicate a degree of agreement or disagreement with each of a series of statements related to the stimulus objects. Circulated 134 questionnaires to selected respondents of bank employee, University employee, faculties of various collages, businessman and person employed in private sector. We received 106 filled questionnaires and the researcher has finally considered responses of 100 respondents on the basis of completeness of the questionnaire. The data were analyzed by examining the distribution of responses based on frequencies and percentages. Next, multiple regression analyses were conducted through the SPSS 17 (Evaluation Version)

Data Analysis and Interpretation

Table 1: Profile of Respondents

		Frequency	Percentage
Gender	Male	61	61.0
	Female	39	39.0
Marital Status	Married	53	53.0
	Unmarried	47	47.0
Age	Below 20 years	1	1.0
	20 to 30	61	61.0
	30 to 40	17	17.0
	40 to 50	12	12.0
	50 and above	9	9.0
Education level	Metric & below	30	30.0
	Graduate & below	27	27.0
	Post Graduate	23	23.0
	Professional Graduate	12	12.0
	Professional post Graduate	5	5.0
	Other	3	3.0
Resident	Urban	47	47.0
	Rural	26	26.0
	Semi-urban	20	20.0
	City	7	7.0
Language	Gujarati	94	94.0
	Gujarati, and Hindi	5	5.0
	Gujarati,Hindi, and English	1	1.0

Source : Calculation by author

Table 1 shows the demographic profile of the respondents which consists of gender, marital status, age, level of education and residence, language. From a total of 100 completed questionnaires received, the dominance of men respondents are (61%). Most of the respondents are from urban area (47%), married (53%).61% respondents stands between 20-30 years. 30% respondent are post-graduates or higher degree. Most of respondents knows vernacular language i.e. Gujarati.

Table 2: Total use of Internet Banking

	Frequency	Percent
Yes	81	81.0
No	19	19.0
Total	100	100.0

Source : Calculation by author

Table No 2 shows the using of net banking.19% respondents are not using net banking and 81% respondents are using net banking.

Test of Reliability

Table 2: Factor Analysis and Scale Reliability

Latent constructs	Indicators	Standardized loadings	Reliability(AVE[a],SCR[b])
Perceived of Usefulness (PU)	PU3 PU4 PU1 PU5 PU2	.776 .662 .620 .568 .504	Cronbach's α=0.683
Perceived Ease of Use(PEOU)	PEOU4 PEOU3 PEOU1 PEOU5 PEOU2	.843 .712 .694 .610 .593	Cronbach's α = 0.754
Trust(T)	T3 T1 T2	.821 .785 .743	Cronbach's α = 0.796
Government / Bank Support(I)	I3 I1 I2	.867 .633 .627	Cronbach's α = 0.699

Source : Calculation by author

We can see the Cronbach's alpha ranging from 0.683 to 0.796 for the used scale so this indicate that the scale is reliable.

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.739
Bartlett's Test of Sphericity	Approx. Chi-Square	433.852
	df	136
	Sig.	.000

Source : Calculation by author

The value of the KMO statistics (0.739) is large (=0.5)

KMO measure is 0.739 so we have applied factor analysis to extract factors. The results of principal components analysis are in the table .Null hypothesis that the population correlation matrix is an identity matrix is rejected by Bartlett's test of sphericity. The Approx. Chi-Square statistics is 433.852 with degree of freedom 136, which is significant at the 0.05 level of Analysis.

Table 4: Communalities

	Initial	Extraction
Easy to Use	1.000	.501
Manage Finances Efficiently	1.000	.555
Increases Productivity	1.000	.613
Communication with Bank Much Easier	1.000	.521
Net Banking Useful then Traditional Banking	1.000	.625
Easy to Use	1.000	.688
Learning to Use Net Banking is Easy	1.000	.626
Interaction is Clear and Understandable	1.000	.569
Easy to Remember Task of E-Banking	1.000	.724
Easy to Get All Information	1.000	.572
Net Banking is Secure and Private	1.000	.716
Payments will be Securely	1.000	.613
Personal Information will be Kept Confidential	1.000	.765
Encourage Net Banking	1.000	.650
Internet Infrastructure and Facility	1.000	.573
Government Driving Develop the Net Banking	1.000	.826
Good Regulation and Laws	1.000	.548

Source : Calculation by author

Under "communalities", "Initial" column, it can be seen that communality for each variable is 1. In principal component analysis, the total variance in the data is considered and it is used when the primary concern is to determine the minimum number of factors that will account for maximum variance thedata.

Table 5: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative e %	Total	% of Variance	Cumulative %
1	4.611	27.124	27.124	4.611	27.124	27.124	2.888	16.985	16.985
2	2.365	13.913	41.037	2.365	13.913	41.037	2.370	13.940	30.925
3	1.621	9.535	50.572	1.621	9.535	50.572	2.319	13.642	44.567
4	1.065	6.262	56.834	1.065	6.262	56.834	1.746	10.273	54.840
5	1.023	6.020	62.854	1.023	6.020	62.854	1.362	8.015	62.854
6	.893	5.254	68.109						
7	.777	4.568	72.677						
8	.732	4.305	76.982						
9	.713	4.194	81.176						
10	.618	3.635	84.811						
11	.582	3.426	88.237						
12	.458	2.693	90.931						
13	.403	2.372	93.303						
14	.361	2.121	95.424						
15	.337	1.981	97.405						
16	.230	1.355	98.760						
17	.211	1.240	100.000						

Source: Field Survey

The Table above labelled "Initial Eigen values" gives the Eigen values. The Eigen values for the factor are, as expected in & order of magnitude. The Eigen value for a factor indicates the total variance attributed to those factors and value greater than 1 is considered. 1 component is showing Initial Eigen values 4.611 i.e. variance in % 27.12, 2 component is showing Initial Eigen values 2.365 i.e. variance in % 13.91, 3 component showing Initial Eigen values 1.621 i.e. variance in % 9.53, 4 component showing Initial Eigen values 1.065 i.e. variance in % 6.26, 5 component showing Initial Eigen values 1.023 i.e. .variance in % 6.020 and total variance for all above 5 account for 62.85% of total variance.

Table 6: Component Matrix (a)

	Component				
	1	2	3	4	5
Easy to Use					
Manage Finances Efficiently			.501		
Increases Productivity			.534		
Communication with Bank Much Easier					
Net Banking Useful then Traditional Banking					
Easy to Use					
Learning to Use Net Banking is Easy		.602			
Interaction is Clear and Understandable	.516				
Easy to Remember Task of E-Banking		.521			
Easy to Get All Information	.634				
Net Banking is Secure and Private	.684				
Payments will be Securely	.662				
Personal Information will be Kept Confidential	.619				
Encourage Net Banking	.585				
Internet Infrastructure and Facility	.546				
Government Driving Develop the Net Banking	.500				
Good Regulation and Laws					

Source: Field Survey

As from above table we can see that variable like Net banking is secure and private, Easy to get all information are more attached with component 1, learning to use net banking is easy &Easy to remember task of E-banking are more attached with component 2, Increases productivity &manage finances efficiently for component 3.

Table 7: Rotated Component Matrix (a)

	Component				
	1	2	3	4	5
Easy to Use		.620			
Manage Finances Efficiently		.504			
Increases Productivity		.776			
Communication with Bank Much Easier		.662			
Net Banking Useful then Traditional Banking		.568			
Ease to Use					.694
Learning to Use Net Banking is Easy			.593		
Interaction is Clear and Understandable			.712		
Easy to Remember Task of E-Banking			.843		
Easy to Get All Information			.610		
Net Banking is Secure and Private	.785				
Payments will be Securely	.743				
Personal Information will be Kept Confidential	.821				
Encourage Net Banking				.633	
Internet Infrastructure and Facility	.627				
Government Driving Develop the Net Banking				.867	
Good Regulation and Laws					

Source: Field Survey

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

A Rotation converged in 6 iterations.

In above table, by comparing the Varimax rotated component matrix with the un rotated matrix i.e. component matrix we can see how rotation achieved to simplicity i.e. Payments will be Securely, Personal Information will be Kept Confidential, Internet Infrastructure and facility, Net Banking is Secure and Private. Four variables correlated with components or component 1 in the un- rotated matrix. Easy to Use, Manage Finances Efficiently, Increases Productivity, Communication with Bank Much Easier, Net Banking Useful then Traditional Banking, are correlated highly with only component 2. Learning to Use Net Banking is Easy; Interaction is clear and Understandable, Easy to Remember Task of E-Banking, Easy to Get All Information with component 3. Encourage Net Banking, Government Driving Develop the Net Banking with component 4. Ease to Use with only component 5.

Table 8: Component Transformation Matrix

Component	1	2	3	4	5
1	.640	.462	.435	.373	.221
2	-.541	.415	.584	-.389	.205
3	.004	.765	-.505	-.145	-.372
4	-.233	-.035	.382	.455	-.769
5	-.493	.167	-.262	.694	.422

Source: Field Survey

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Findings and Discussion

Factor analysis clearly indicates that In India; for adoption of internet banking following factors are responsible. Factor No 1 can be named as security which includes the factors payment will be securely, personal information will be kept confidential, net banking is secure and private. Second factor can be named utility it include easy to use, Manage finances efficiently, Increases productivity, communication with bank much easier, net banking useful then traditional banking. Third factor can be named support it include encourage net banking, Government driving development the net banking. Fourth factor can be named Easiness it includes ease to use, interaction is clear and understandable, Easy to remember task of e-banking, easy to get all information.

Conclusion

In India there are many factors that affects adoption of Internet Banking but reason on findings shows that security provided by banks is the first and foremost factor that are being considered by customers followed by easy to use internet banking, Perceived Ease of Use and finally support by bank & Government for using internet banking. Usefulness of internet has higher impact on adoption rate.

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