

# Customer Responsiveness on Banking Technology Products in Rural South India

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**Abstract** - This project is about “customer responsiveness on banking technology products in rural south india”. This study is mainly done to measure the customer responsiveness towards the technology products of banks in rural Tamilnadu. Indian banks today are as technology-savvy as their counterparts in developed countries. Branch networking coupled with ATM networks has resulted in expansion of banking services across the country. Introduction of new technology based products and services have put the banking industry on a new growth trajectory. The purpose of this research is to study the extent of usage of various banking products and services by customers. Field surveys with structured questionnaires (interview schedule) were used to collect primary data from the customers on random sample basis in Branches in rural Tamilnadu. Indian Banks have effectively leveraged technology and introduced several variants of traditional products and new e-based services. While ATM has become popular for cash withdrawals, other services like mobile banking and internet banking are sub-optimally used. Customers are still not using the full range of services available in ATMs. This research would surely help the bank branches to know about the responsiveness level of rural customers towards technology products and helps them to take necessary steps to improve.

**Keywords:** Customer responsiveness, Customer Awareness, Technology-Savvy, Internet and Mobile banking, ATM network.

## I. INTRODUCTION

Technology has opened up new markets, new products, new services and efficient delivery channels for the banking industry. With the growing Internet awareness among customers, increase in role of banks in e-business and growing reach of the internet, e-banking would become an important part of the Indian banking sector in the years to come. The use of most modern and advance methods of equipments in banking industries is called ‘E-BANKING’. The E-Banking is changing the banking industry and is having the major effects on banking relationships. Technology is then essential in providing faster and more efficient services to customers. Technology acquisition must be based on actual needs and the proven ability to deliver customer – friendly solutions. Technological innovation not only enables a broader reach for consumer banking and financial services, but also enhances its capacity for continued and inclusive growth.

The banking industry has shown tremendous growth in volume and complexity during the last few decades. Despite making significant improvements in the areas relating to financial viability, profitability and competitiveness, there are concerns that banks have not been able to reach and bring vast segment of the population, especially the underprivileged sections of the society, into the fold of basic banking services.

TABLE I RURAL & URBAN BANKING AT GLANCE

Group	Population (Crore)	Branches (in '000)	Per Branch Population	Share of Deposits	Share of Advances
Rural	83 (68)	34 (37)	24	9%	8%
Urban	38 (32)	59 (63)	6	91%	92%
Total	121	93	13	100	100

*Source: Census 2011 & RBI Banking Statistics – Handout Dec`11*      ( ) denotes percent

## II. OBJECTIVES OF THE STUDY

The Objectives of the research are as follows:

1. To measure the customer responsiveness level of technological products offered by banks in rural South India
2. To know the customer perception of technology products in rural areas.

3. To know the purpose of using technology products in rural areas
4. To understand the factors affecting the usage of technology products in rural areas.

## III. LITERATURE REVIEW

R. Seranmadevi, M. G. Saravanaraj (2012), from their study on “Technology on Indian Banking Sector”, observed

the role of information technology (IT) in the Indian banking industry. Indian banks are investing heavily in the technologies such as automated teller machine (ATMs), net banking, mobile banking, tele -banking, credit cards, debit cards, smart cards, call centers, CRM, data warehousing etc. It is essential to evaluate the impact of information technology on the performance of Indian banks in terms of extended value added services and customer satisfaction thereby.

Andrew Musiime, Malinga Ramadhan (2011), from their study on “Internet banking, consumer adoption and customer satisfaction”, examined the factors that influence consumer adoption of Internet banking service as well as examine the relationship between Internet banking service, customer adoption and customer satisfaction. The study established that there was a significantly positive relationship between Internet banking and customer satisfaction.

Shirshendu Ganguli, Sanjit Kumar Roy (2011), from their study on “Generic technology-based service quality dimensions in banking”, identified four generic service quality dimensions in the technology-based banking services – customer service, technology security and information quality, technology convenience, and technology usage easiness and reliability. It was found that customer service and technology usage easiness and reliability have positive and significant impact on customer satisfaction and customer loyalty.

Alabar, T. Timothy (2012), in their study on “Electronic Banking Services and Customer Satisfaction in the Nigerian Banking Industry”, identified that the Electronic banking services (EBS) are a recent invention that has come to stay in the Nigerian banking industry. One wonders whether these services as recent as they are create optimum satisfaction to teeming customers. It is against this backdrop that the paper is set to examine the relationship between these services and customer satisfaction in the industry.

Nouman Anwar Dar (2011), in his study on “Awareness of Electronic Banking in Pakistan”, observed that the Electronic Banking is an essential sector of banking industry. This research paper focuses on growth and awareness of electronic banking in Pakistan. Electronic banking is today’s need as it provides easy way to monitor an account. Most of the commercial banks in the country switched to the convenience ways in accessing the accounts of the customers and giving them the freedom for the easy access.

Dr. Mahalaxmi Krishnan, Darshana Kadwadkar (2009), in their study on “Emerging Challenges of Technology Based Banking Services in the New Millennium”, observed that Indian banks today are as technology-savvy as their counterparts in developed countries. The purpose of this research is to study the extent of usage of various banking products and services by customers. While ATM has

become popular for cash withdrawals, other services like mobile banking and internet banking are sub-optimally used. Banks must aggressively promote e-banking services so as to reduce footfalls in branches.

Khalil Mohammed Khalil (2011), in his study on “Online Service Quality and Customer Satisfaction”, examined the impact of E-SERVQUAL model on customer satisfaction. Four service quality dimensions namely tangibles, reliability, responsiveness, assurance, and empathy have been established based on the SERVQUAL model. These variables have been tested to explore the relationship between online service quality and the customer satisfaction. The study shows that these dimensions are good to measure the relationship between online service and customer satisfaction.

K.T. Geetha & V.Malarvizhi (2010), in their study on “Acceptance of E-Banking among customers”, observed the factors which are affecting the acceptance of e-banking services among the customers and also indicates level of concern regarding security and privacy issues in Indian context .The finding depicts many factors like security and privacy and awareness level increased the acceptance of e-banking services among Indian customers and it shows that if banks provide them necessary guidance and ensure safety of their accounts, customers are willing to adopt e-banking.

Alhaji Abubakar Aliyu , Sayf M.D Younus, Rosmaini Bin HJ Tasmin (2012),in their study on “An Exploratory Study on Adoption of Electronic Banking-Underlying Consumer Behaviour and Critical Success Factors”, observed the relationship between Electronic banking adoption and the determining factors for critical success of Electronic Banking. The factors like awareness, ease of use, security, cost, reluctance to change and accessibility determines the adoption of Electronic banking.

Dr. Nasim Z. Hosein (2011), in his study on “Internet banking: Understanding consumer adoption rates among community banks”, observed that the success of internet banking is determined not only by banks or government support, but also by customers' acceptance of it. The business benefit of the internet banking is to generate additional revenue, improve customer service, extend marketing, and increase cost saving. The results from the survey indicated that customers who have some level of Internet usage and some degree of Internet experience have led to an increase in the adoption of internet banking.

#### **IV. NEED FOR THE PRESENT STUDY**

Indian banks have leveraged technology and have introduced an array of products and services. This study examines the extent of use of these products and services by rural customers and the issues emerging for banks for enhancing customer service.

### Research Gap

Despite of growing interest and importance of usage of technology products among customers in many financial institutions, still there have remained lower adoption rates among rural customers. Its usage has not brought significant outputs in the way rural customers become happy with the services offered, and indeed extant literature indicates that despite such growing interest, no significant studies that have focused on “Customer responsiveness level on Technology Products in rural south India”.

The present study intends to know the factors for the awareness level of technology products by the rural customers and also indicates level of concern regarding security and privacy issues in Indian context.

## V. RESEARCH METHODOLOGY

### Coverage of the Study

This research covers 15 branches of 5 different banks in the rural branches of Chennai, Madurai, Erode, Coimbatore and salem districts in Tamilnadu and their bank customers.

### Sources of Data

Data and information were gathered from primary source by means of field survey using structured questionnaires

covering bank customers on random sample basis in rural bank Branches and from secondary published sources. Primary sources included personal interviews, questionnaires and visits to branches. While the bank staffs were interviewed at branches, customers were met at ATMs, branches and at bus stops. Secondary sources included books, journals, newspapers, websites, and research studies.

### Sample Size

The total sample size selected for the study from the 5 banks in rural Tamilnadu is 610. Out of which, 122 Samples were selected from a each bank. Sample size is determined using

$$N = (Z^2 * \sigma^2) / E$$

$$= (1.96)^2 * ((5-1)/1)^2 / 0.5$$

Sample Size = 122 (for a Single Branch)

So the total sample size taken for the study is 610 that is 122 separately from 5 banks .

### Sampling Method

Stratified sampling technique has been chosen for this study and the samples are collected in a random lottery method.

### Data Analysis

Critical analysis of the data and information collected from primary sources as well as from published sources were made keeping the objectives of the study in mind.

## VI. RESEARCH FINDINGS

TABLE II DISTRIBUTION OF RESPONDENTS ON THE BASIS OF DEMOGRAPHIC FACTORS

S.No.	Variables	No. of Respondents	Percentage
<b>GENDER</b>			
1	Male	355	58
2	Female	255	42
<b>AGE</b>			
1	Below 25 Years	190	31
2	26 – 40 Years	255	42
3	41 – 50 Years	85	14
4	51 – 60 Years	43	7
5	Above 60 Years	37	6
<b>ANNUAL INCOME</b>			
1	< 50000	140	24
2	> 50000 – 1 Lakh	210	34
3	> 1 Lakh – 3 Lakhs	180	29
4	> 3 Lakhs – 5 Lakhs	45	7.3
5	> 5 Lakhs	35	5.7
<b>EDUCATIONAL QUALIFICATION</b>			
1	SSLC	45	8
2	HSC	110	18
3	Under Graduate	275	45
4	Post Graduate	125	20
5	Others	55	9

Source: Field Survey, 2013

Table II represents the demographic characteristics of the 610 respondents. It is inferred from the analysis that

majority (58%) of the respondents is Male and 42% are Female. It is also inferred from the analysis that majority

(42%) of the respondents are from the age group of 26 – 40 Years and 31% are from the age group of Below 25 Years and 14% are from the age group of 41 -50 Years and 7% are from the age group of 51 – 60 Years and 6% are from the

age group of above 60 Years. It is inferred from the analysis that the majority (34%) of the respondents is with the annual income level of > 50000 – 1 Lakh and the majority (45%) of the respondents is Under Graduates.

TABLE III TYPE OF ACCOUNT OPERATED BY CUSTOMERS

S.No.	Variables	No. of Respondents	Percentage
1	Current Account	55	9
2	Fixed Deposit	120	20
3	Savings Account	195	32
4	Recurring Deposit	240	39

Source: Field Survey, 2013

It is inferred from the analysis that the majority (39%) of the respondents is operating the recurring account and 32% of the respondents are operating the savings account and 20% of the respondents are operating the fixed deposit and 9% of the respondents are operating the current account.

influencing factors which will determine the awareness level of the customers.

**Assessment of the Degree of Association of Factors**

The 13 different factors are taken for the study and they are analyzed through the factor analysis to predict the most

These factors are analyzed using principle component extraction method with Varimax rotation. The numbers of factors were unconstrained. Pure variables have loading of 0.5 and greater or only one factor. Complex variables may have high loading on more than one factor and they make the interpretation of the output difficulty. Then rotated the components 7 times to get the significant variables under four factors.

TABLE IV RELIABILITY STATISTICS-FACTOR ANALYSIS

Cronbach's Alpha	No.of Items
0.752	13

Table IV shows the reliability statistics and proves the data could support 75.2 percentage reliable to do this analysis.

TABLE V KMO AND BARTLETT'S TEST

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.721
Bartlett's Test of Sphericity	Approx. Chi-Square	325.87
	Df	78
	Sig.	0

Table V indicates that the Kaiser-Meyer-Olkin (KMO) measures of sampling adequacy in the study is 0.721, which was higher than the recommended minimum of 0.6 indicating that the sample size was adequate for applying factor analysis.

TABLE VI TOTAL VARIANCE EXPLAINED

Comp.	Initial Eigenvalues			Extraction Sums of Squared Loadings	%	Cumulative %	Rotation Sums of Squared Loadings	%	Cumulative %
	Total	% of Variance	Cumulative %						
1	3.329	25.605	25.605	3.329	25.605	25.605	2.262	17.398	17.398
2	1.721	13.236	38.840	1.721	13.236	38.84	1.917	14.747	32.145
3	1.307	10.054	48.894	1.307	10.054	48.894	1.833	14.102	46.247
4	1.037	7.973	56.868	1.037	7.974	56.868	1.381	10.621	56.868
5	3.329	25.605	25.605						
6	0.843	6.482	70.611						
7	0.748	5.757	76.368						
8	0.732	5.632	82.001						
9	0.605	4.656	86.657						
10	0.513	3.949	90.605						
11	0.500	3.848	94.453						
12	0.447	3.436	97.889						
13	0.274	2.110	100.000						

Extraction Method: Principal Component Analysis.

Table VI depicts the total variance explained. Total variance is explained with rotation, the Eigen values are different for factor 1,2,3 and 4. The eigen values for factor 1,2,3 and 4 are 3.329, 1.721, 1.307 and 1.037. Percentage of variance

for factors 1,2,3 and 4 are 25.605, 13.236, 10.054 and 7.974 respectively. It indicates that four factors extract from 13 factors have cumulative percentage upto 56.868% of the total variance.

TABLE VII ROTATED COMPONENT MATRIX

No.	Factors	COMPONENT			
		F1	F2	F3	F4
1	X_9	0.806			
2	X_12	0.699			
3	X_8	0.569			
4	X_13	0.536			
5	X_5	0.525			
6	X_7		0.869		
7	X_6		0.864		
8	X_1			0.773	
9	X_3			0.707	
10	X_2			0.58	
11	X_11			0.377	
12	X_4				0.712
13	X_10				0.597

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.  
 Rotation converged in 7 iterations.

Factor 1 is the most important factor which explained 17.398% of the variation. The factors as X9 (0.806), X12 (0.699), X8 (0.569), X13 (0.536) and X5 (0.525) are highly correlated with each other. The factor named as ‘Awareness of Products among Customers’. In this factor Awareness in the bank is an important and has the highest correlated value of 0.806.

Factor 2 is the next factor explained 14.747% of the variation. The factors as X7 (0.869) and X6 (0.864) are highly correlated with each other. The factor named as ‘Online Payments’. In this factor Online Payments in the bank is an important and has the highest correlated value of 0.869.

Factor 3 is the next factor explained 14.102% of the variation. The factors as X1 (0.773), X3 (0.707), X2 (0.58) and X11 (0.377) are highly correlated with each other. The factor named as ‘Secured Transactions’. In this factor Secured Transaction in the bank is an important and has the highest correlated value of 0.773.

Factor 4 is the next factor explained 10.621% of the variation. The factors as X4 (0.712) and X10 (0.597) are highly correlated with each other. The factor named as ‘Convenience of Services’. In this factor Convenience of Services in the bank is an important and has the highest correlated value of 0.712.

TABLE VIII FACTORS AS THE RESULT OF FACTOR ANALYSIS

Factor No.	Factor Renamed
Factor 1	Awareness of Products among Customers
Factor 2	Online Payments
Factor 3	Secured Transactions
Factor 4	Convenience of Services

**VII. CONCLUSION AND RECOMMENDATIONS**

Today in India almost every private as well as nationalized banks are providing IT based products and services to their customers and co-operative banks have recently entered into the same. Services and Products like “Anywhere Banking”, “Tele-Banking”, “Internet Banking”, “Web Banking”, “E-Banking”, “E-Commerce”, “E-Business” etc.. have become the buzzwords of the day and the bank are trying to cope with the competition by offering innovative and attractive packaged technology-based

services to their customers. On the basis of the analysis, it can be concluded that usage of banking services by rural customer is still not open wide. It is found that only educated, well to do persons and male forms the majority of the users. Housewives, small businessmen and persons from unorganized sector feel shy and keep themselves away from banking the banking services. It can be concluded that there is an urgent need of spreading the awareness among the common people. The small business men, the housewives, the person’s working in unorganized sector be convinced to

use banking and e-banking services. They should feel that their money is more safe and secure with the bank.

1. The rural customers are more reluctant to join new technologies or methods because they feel that might contain little risk. Hence, the bank can design the website to address security and trust issues.
2. The bank can organize seminar and conference to educate the rural customer regarding uses of online banking as well as security and privacy of their accounts.
3. The bank can make their rural customers aware and educate them regarding the possible risks associated while going online for banking services, so that the customers will be benefited.
4. Awareness about the technology products can be created among the rural customers through certain measures such as creating a separate department which deals with issues related with educational promotion of technological products.
5. Majority of the rural customers feel that holding of shares and securities are risky. This feel among customers should have to be removed by taking necessary steps.

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