

## **Adoption and Challenges of Mobile Banking in Kanyakumari District**

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### **ABSTRACT**

*Many banks around the world are offering banking services through mobile phones. Mobile banking is a system that aids the customers to carry out the financial transactions with the help of their mobile telecommunication devices. This technology helps us to save time and provide facilities to get the information about the details of account, transaction and transfer the money from one account to another account from anywhere and anytime. The main objective of this article is to find out the barriers in using mobile banking services and to analyse the important reason considered for using mobile banking. This article found that the important reason for using mobile banking are Convenience and Modern Technology as these variables got the highest mean scores, trust in m-banking is the least variable in considering the use of mobile banking. Factor analysis is used to find out the Barriers in adopting mobile banking services. The analysis indicate that 4 factors are extracted which account for 82.602 per cent of the total 12 variables. Hence 12 factors are summated to 4 factors named as Complex Process, Technical Problem, Improper Security, and Inadequate Knowledge.*

**Keywords:** Mobile banking, Reasons for using mobile banking, Barriers in adopting Mobile Banking, telecommunication devices.

### **INTRODUCTION:**

Recent innovations in the telecommunication have proved to be a boon for the banking sectors and its customers. One of these is Mobile Banking, where customers interact with the bank via mobile phones and banks provide them the services like short message services, funds transfers, account details, issue of cheque books etc. Presently almost all the banks in the world have started providing their customers "Mobile Banking Services". Mobile banking refers to provision of banking services with the help of mobile telecommunication devices. The offered services may include facilities to conduct bank transactions, to administer accounts and to access customized information. The launch of mobile banking has a long way to go as majority of the customers prefer banking in traditional ways. The problem of the most customers is that they are not well educated and they are unaware of the technological innovations. Internet banking helps to give the customers access anytime to their banks. Customers can check their account details, get their bank statements, perform transactions like transferring money to other accounts and pay their bills sitting in the comfort of their homes and offices. But the biggest limitation of internet banking is the requirement of a personal computer with an internet connection. Mobile banking addresses this fundamental limitation of internet banking, as it reduces the customer requirement to just a mobile phone. Mobile usage has seen as an explosive growth in most of the Asian countries like India. The main purpose of mobile banking scores over internet banking by providing 'Anywhere, Anytime Banking availability'. Customers don't need a computer terminal to access their bank accounts.

## **REVIEW OF LITERATURE:**

A review of the previous studies of adoption and usage of mobile banking is necessary to know the areas already covered. This will help to find out new areas hitherto unexplored and to study them in depth. The important studies are as follows.

Neha Sharma (2015) has made a study to identify the factors influencing the adoption and usage of mobile banking in India. The findings indicate that out of the total respondents of mobile banking users 74% respondents felt that mobile banking was very convenient and flexible. The benefits of mobile banking were like no queue and one could do banking anywhere and anytime. The researcher concluded that mobile phones had immense potential of conducting financial transactions and thus lead the financial growth with lot of convenience at reduced cost.

Gurmeet Singh Saini (2014) in his paper has discussed on mobile banking, RBI guidelines regarding mobile banking in India, advantages of adopting this new technology in the part of banking sector and the consumer and issues related to this new form of banking. The data were collected from 150 respondents from Delhi city. It was found that 61.33% respondents opined that this system was less expensive and time saving and 58.67% respondents would like to try this service. He concluded that most of the population of India is still living in rural areas speaking different language. So the software should be available in different languages and user friendly.

Dr. Edwin M. Agwu and Dr. Adde Louise Carter (2014) investigated the extent of the adoption and usage of the mobile phone banking services among banking customers in Nigeria and the associated problems. Many banking customers all over the world remained skeptical about the benefits of mobile financial services and the levels of security provided with these services. The findings of this study however, discovered that phone banking was more established than internet banking and ATM services but ATM services had a wider reach, the overriding factors that affected this situation included the cost and maintenance involved, education of customers, poverty and infrastructure availability. They concluded that, mobile banking was the evolutionary step for banking services in Nigeria. Most customers view the phone banking was very secure and were comfortable with its usage.

T. Velmurugan and Dr. M. Ramesh (2014) in their study analyzed the uses of different services offered by the banks through the mobile banking services. Banks had to provide facilities to their customers whenever they were in need and wherever they were. That facility was termed as "anywhere and any moment banking". The objective of the study is to identify their mobile financial services effectiveness. They found that the SMS alert for account transactions and enquiry of branch location and ATM location were highly used by the respondents. Bankers should create awareness programme to their customers and encourage them to use mobile banking services.

Mr. Khauja Sarfaraz (2015) in his study entitled, "A Study of M- Banking and Customer Satisfaction in Aurangabad", has conducted a research to discuss the M- banking services for customers and to find out the awareness among customers about mobile banking services. Initially mobile banking services were accessible over SMS, a service acknowledged as SMS banking. It was found that 83% customers were aware about m-banking services and 11% customers were not aware while 6% customers were indifferent. Hence it was clear that the maximum customers were aware with the m-banking services which were provided by the banks for the benefit of customers. The majority of the bank customers i.e. 86% accepted that m-banking provided quality services and 11% of respondents assume that service was the same in m-banking and normal banking. While only 3% of respondents disagreed with the view. It was concluded that mobile banking has one of the most recognizable banking qualities all over the globe. M-Banking through mobile phones can be the correct preference for the proficient banking sector.

## **OBJECTIVES OF THE STUDY**

1. To find out the barriers in adopting mobile banking services.
2. To analyse the important reasons for using mobile banking.

## **METHODOLOGY OF THE STUDY:**

The methodological approach in this study is exploratory and descriptive in nature. This study was based on field level data. The total sample size was fixed as 120 customers. Necessary data were collected from different ages of people and analysed in terms of the objectives set for the study. The data for this study were collected by the survey method. Survey is a research technique in which information is gathered from a sample of people by use of a questionnaire. Both primary and secondary data were used for the study. Secondary data were used for providing the theoretical background. Secondary data collected from journal, books, internet etc. Primary data were collected by the researcher herself through the questionnaire.

**DATA ANALYSIS AND INTERPRETATION:**

**Barriers in adopting mobile banking services:  
 Factor Analysis:**

Factor analysis is a very useful method of reducing the complexity of the data by reducing the number of variables. It is an excellent way in identifying the latent factors by analysing correlation among variables and it explains the variables that influence much to the base or dependent variables.

Bartlett’s test of Sphericity and Kaiser Meyer Olkin (KMO) measures of sample adequacy are used to test the appropriateness of the factor model and its results are shown below.

**Table 1: KMO and Bartlett’s Test**

KMO Measure of sampling adequacy	.791
Bartlett’s test of Sphericity	1174.176
App. Chi-square value	66
df	.000
Sig	

The KMO value is very high (.791). Similarly the Bartlett’s test rejects the approximate chi-square value is 1174.176 at 66 degrees of freedom which is significant at 1% level of significance. Thus factor analysis may be considered as an appropriate technique.

The results of the Principal Component Analysis to extract the number of variables are given below.

**Table 2: Principal Component Analysis**

Component	Extraction Sums of Squared Loading			Rotated Sums of Squared Loading		
	Total	Percentage of Variables	Cumulative Percentage	Total	Percentage of Variables	Cumulative Percentage
1	6.055	50.456	50.456	3.885	32.377	32.377
2	1.704	14.203	64.659	2.694	22.449	54.826
3	1.148	9.570	74.228	1.685	14.044	68.870
4	1.005	8.373	82.602	1.648	13.732	82.602

From the above table shows it is clear that 5 factors can be extracted together which account for 82.602 per cent of the total 12 variables. Hence 12 factors are summated to 4 factors by loosing nearly 17 per cent of data.

The table presented below gives the Rotated Component Matrix table found by using Varimax Method which is used to assign factors which have higher loadings.

**Table 3: Rotated Component Matrix**

S. No	Factors	Complex Process	Technical Problem	Improper Security	Inadequate Knowledge
1	Fear of theft phone and data	.894			
2	Maintain Privacy	.874			
3	Complexity in use	.863			
4	All time not Possible	.850			
5	Barrier in withdrawing Higher Amount	.841			
6	Login/sign off not easy	.829			
7	Internet banking Popular	.797			
8	High Charge	.697			
9	Incompatible Device		.772		
10	Network Problem		.679		
11	Proper security			.679	
12	Lack of knowledge				.602

The above table shows that in the first column the variables namely, ‘Fear of theft phone and data, Maintain Privacy, Complexity in use, All time not Possible, Barrier in withdrawing Higher Amount, Login/sign off not

easy, Internet banking Popular, High Charge’ have higher loadings of .894, .874, .863, .850, .841, .829, .797, .697 respectively and it can be suggested that factor 1 is the combination of these nine factors and have the variance of 32.377 percent and it can be named as ‘Complex Process’.

From the second column it can be seen that the variables of ‘Incompatible Device, Network Problem’ have the higher loadings with a variance of 22.449 and it can be combined and called as ‘Technical Problem’.

The third column has only one variable i.e., the ‘Proper Security’ has the higher loading to be named as ‘Improper Security’.

In the last column also have only one variable i.e., the ‘Lack of Knowledge’ has the higher loadings to be named as ‘Inadequate Knowledge’.

Thus 18 factors are reduced to five variables and are given different names by using factor analysis.

**Important Reason for using Mobile Banking:**

The mobile banking users were asked to rank some of the important criteria to considering mobile banking. Important criteria such as Convenience, Security, Time Saving, 24x7 services, Trust in bank, Economy in cost, Attractive facility, Modern Technology. The percent position of each rank was found using the following formula.

$$\text{Percent position} = \frac{100(R_{ij}-0.5)}{N_j}$$

Where,

R<sub>ij</sub> = Rank given to i<sup>th</sup> factor j<sup>th</sup> individual

N<sub>j</sub> = Number of factor ranked by j<sup>th</sup> individual.

By referring the table given by Garret, the percent position estimated were converted into scores. Then for each factor the scores of various respondents were added and divided by the number of respondents to arrive at the mean score. The mean scores thus obtained for the other factors were arranged in a descending order. The factor with the highest mean score was given the first rank, followed by second and so on. The results are presented in the following table.

**Table 4: Important Reason for using Mobile Banking**

S.No	Important Criteria	Garrett’s Rank Mean Score	Rank
1	Convenience	60.51	I
2	Modern Technology	56.49	II
3	Time Saving	51.72	III
4	24x7 service	44.61	IV
5	Attractive facility	42.97	V
6	Economy in cost	40.36	VI
7	Security	39.61	VII
8	Trust in M- banking	36.22	VIII

**Source:** Primary Data

It is inferred from the table 4 that the important reason in using mobile banking is due to ‘Convenience’ which has been ranked first with the highest mean score of 60.51. The second reason is ‘Modern Technology’ with the mean score of 56.49. ‘Time Saving’ is ranked third as it has the next highest mean score of 51.72 and ‘24x7 service’ get the fourth rank. ‘Attractive Facility’ is another important reason considered for using mobile banking as it got the fifth rank. ‘Economy in Cost’ gets the sixth rank. ‘Security’ and ‘Trust in M-banking’ are the least important reason for using mobile banking.

**FINDINGS:**

Mobile banking is an application of mobile computing which provides customers with the support needed to be able to bank anywhere, anytime using a mobile handheld device and a mobile service such as Short Message Service (SMS). Mobile banking facility removes the space and time limitations from banking activities such as checking account balances or transferring money from one account to another and time saving by going to bank and doing some banking activities. This article explains clearly Barriers in adopting mobile banking services and reason for using Mobile Banking. By applying Henry’s Garrett Ranking technique it is found that the important reason for using mobile banking are Convenience and Modern Technology as these variables got the highest mean scores, trust in M-banking is the least variable in considering the use of mobile banking. Factor

analysis is used to find out the Barriers in adopting mobile banking services. The analysis indicate that 4 factors are extracted which account for 82.602 per cent of the total 12 variables. Hence 12 factors are summated to 4 factors named as Complex Process, Technical Problem, Improper Security, and Inadequate Knowledge.

#### **SUGGESTION:**

1. To provide various effective modes for promotional schemes interaction with the customer, more accuracy in billing, financial security and privacy in transactions.
2. The banks should give awareness about the mobile banking services to their customers and try to remove all the doubts of the customers regarding mobile banking services.

#### **CONCLUSION:**

Mobile banking helps the customer to transact with the help of a mobile phone. So he can avoid his visits to the bank. Mobile banking services accessible from anywhere in the globe provides various banking and financial services under single umbrella and gives complete freedom of banking anywhere anytime on 24x7x365 basis. Mobile Banking is a convenient financial service to the Customers. Customers can avail all account transactions like Bill payment, Credit Amount, Debit Amount, Fund Transfer etc. It offers many benefits with ease of use. But still it has some limitations. So this paper discussed the major barriers in adopting Mobile Banking services.

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