

## **To study consumer awareness & perception towards usage of Mobile Banking**

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### **ABSTRACT**

The major banks in India are increasingly providing services through electronic channels such as ATMs, internet banking, Tele-banking and mobile banking. The research is an attempt to study the consumer awareness on mobile banking & perception about the same. A survey research is conducted among the consumers who are residing in Pune. The study shows that consumers are aware about mobile banking service provided by their bank. Consumers are familiar about various banking transactions that can be done with the help of mobile banking. Consumers think that mobile banking is easy to use; it is very useful for them as it will give them flexibility to do transactions irrespective the time of day. Consumers think that major advantage of mobile banking is 'Anywhere anytime banking'.

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**Keywords:** Consumers, Electronic channels, Mobile Banking

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### **Introduction**

The world is changing at a staggering rate and technology is considered to be the key driver for these changes around us. An analysis of technology and its uses show that it has permeated in almost every aspect of our life. Many activities are handled electronically due to the acceptance of information technology at home as well as at workplace. Slowly but steadily, the Indian customer is moving towards new banking services like internet banking & mobile banking. Mobile banking is a generic term for the delivery of banking services through mobile phones, personal digital assistant (PDA). It facilitates an effective payment and accounting system thereby enhancing the speed of delivery of banking services considerably. Mobile phones as a delivery channel for extending banking services have off-late been attaining greater significance. With the rapid growth in the number of mobile phone subscribers in India (about 950 million as at the end of February 2013 and growing at about 8 million a month) mobile banking has a lot of potential. Most of the banks have started offering information based services like balance enquiry, stop payment instruction of cheques, transactions enquiry, and location of the nearest ATM/branch etc. Acceptance of transfer of funds instruction for credit to beneficiaries of

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same/or another bank in favor of pre-registered beneficiaries have also commenced in a few banks. In order to ensure a level playing field and considering that the technology is relatively new.

### **Introduction to Mobile Banking**

#### *What Is Mobile Banking?*

Mobile banking (also known as M-Banking, m-banking, SMS Banking) is a term used for performing balance checks, account transactions, payments, credit applications and other banking transactions through a mobile device such as a mobile phone or Personal Digital Assistant (PDA). The earliest mobile banking services were offered over SMS. With the introduction of the first primitive smart phones with WAP support enabling the use of the mobile web in 1999, the first European banks started to offer mobile banking on this platform to their customers.

Mobile banking has until recently (2010) most often been performed via SMS or the Mobile Web. Mobile Banking refers to provision and availing banking- and financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customized information."

According to the conceptual model of Mobile Banking can be said to consist of three inter-related concepts:

1. Mobile Accounting
2. Mobile Brokerage
3. Mobile Financial Information Services

Mobile phone banking may also be used to help in business situations as well as financial.

#### *Mobile Banking Services*

Banks offering mobile access are mostly supporting some or all of the following services:

- |  |                                 |
|--|---------------------------------|
| 1. Account Balance Enquiry                                   | 2. Account Statement Enquiries. |
| 3. Cheque Status Enquiry.                                    | 4. Cheque Book Requests.        |
| 5. Fund Transfer between Accounts.                           | 6. Credit/Debit Alerts.         |
| 7. Minimum Balance Alerts.                                   | 8. Bill Payment Alerts.         |
| 9. Bill Payment.   | 10. Recent Transaction History  |
| 11. Information Requests like Interest Rates/Exchange Rates. |                                 |

### *Technologies behind Mobile Banking*

Mobile Banking is being deployed using mobile applications developed on one of the following four channels.

1. IVR (Interactive Voice Response)
2. SMS (Short Messaging Service)
3. WAP (Wireless Access Protocol)
4. Standalone Mobile Application Clients

### *Advantages of Mobile Banking*

Mobile banking through cell phone offers many advantages for customers as well as banks. Some of them are as follows:-

1. Mobile banking has an edge over internet banking.
2. Cell phone banking is cost effective, user friendly, time saving
3. Banking through mobile reduces the risk of fraud.
4. Banking through cell phone benefits the banks too. It cuts down on the cost of tele- banking and is more economical.
5. Banks can be in touch with their clients with mobile banking.
6. Banks can also promote and sell their products and services like credit cards, loans etc. to a specific group of customers.
7. Various banking services like Account Balance Enquiry, Credit/Debit Alerts, Bill Payment Alerts, Transaction History, Fund Transfer Facilities, and Minimum Balance Alerts etc. can be accessed from your mobile.

### **Objectives of Study**

1. To understand what is mobile banking?
2. To find out whether consumers are aware about mobile banking.
3. To find out their perception about mobile banking.

To find out factors which then explored can help to deepen the reach of mobile banking to more consumers

## Literature Review

### *Consumer Awareness*

Consumer awareness is a marketing term. It means that consumers note or are aware of products or services, its characteristics and the other marketing P's (place to buy, price, and promotion).

Usually commercials and ads increase consumer awareness, as well as "word of mouth" (a comment from someone you know about a product or service).

Need: we need it so we will not be misled by producers, it explains if what we buy is worth to our money and not harmful to us and to environment.

Role of producer: Producers are the ones who are manufacturing products or delivering services. Their responsibility is to educate customers about their product/service. When they are providing services they should carry out it with due skill & care.

### *Consumer Attitude towards M-Banking*

Technological innovations are having significant importance in human general and professional life. This era can safely be attributed as technology revolution. The quick expansion of information technology has imbibed into the lives of millions of people. Rapid technology advancements have introduced major changes in the worldwide economic and business atmosphere [1]. Research on consumer attitude and adoption of mobile banking showed there are several factors predetermining the consumer's attitude towards online banking such as person's demography, motivation and behavior towards different banking technologies and individual acceptance of new technology. It has been found that consumer's attitudes toward online banking are influenced by the prior experience of computer and new technology [2]. The adoption of electronic banking forces consumers to consider concerns about password integrity, privacy, data encryption, hacking, and the protection of personal information [3]. Electronic banking requires perhaps the most consumer involvement, as it requires the the web services technology. A key component of many initiatives is the implementation of Customer Relationship Management (CRM) software [4]. Many companies in the financial services sector have been quick to implement Internet capabilities, and electronic service is becoming a viable option for interaction between financial service providers and their customers [5]. Customer satisfaction and customer retention are increasingly developing into key success factors in e-banking [6]. Technology, in particular, has been increasingly employed in service organizations to enhance customer service quality and delivery, reduce costs, and standardize core service offerings.

This study considers the four factors usefulness of M-Banking, consumer awareness, ease of use of M-banking and intention to use M-Banking. The present study aims at examining the impact of these factors on each other to determine the consumer awareness & perception about mobile banking of the consumers.

### **Research Methodology**

Sample size – 70 respondents; which includes population from Pune University, working professions and students from different colleges. Structured questionnaire is used to gather information. Closed ended questions and Linker scale questions are included in questionnaire. Interviews of respondents are conducted.

### **Major Hypothesis**

1. Consumer awareness has significant impact on interest to use M-Banking.
2. Usefulness of M-Banking has significant impact on the interest to use M-banking.
3. Ease of use of M-Banking has significant impact on the interest to use M-Banking.

### **Materials and Methods**

Exploratory research will be conducted to investigate the major factors that influence consumers to use or not to use M-Banking. Convenience sampling method was used. It is a type of non-probability sampling which involves the sample being drawn from that part of the population which is close to hand. The reasons of using this sampling type are twofold. First, it offers an easy way to obtain the raw data for the further analysis. Second, it saves times and costs since the respondents can be randomly selected SPSS software will be used for analysis once the data is collected through the questionnaire.

Following factors will be analyzed in SPSS:

1. Cross tabulation
2. Factor analysis
3. Chi square test

### **Limitations to the study**

1. The geographical scope of the study is limited to, Pune University Campus, Kothrud & Pune area alone.
2. The sample size is confined to 70.
3. The consumer attitude may change in future.
4. The respondents were unable to spend much time for filling up the questionnaire.

## Data Analysis and Interpretation

**Table-1: Analysis Questions**

Basic Analysis Questions	Respondents (%)		
	Yes	No	Uncertain
Know Mobile banking is available in India	99	01	00
Have heard of mobile banking before	94	02	04
Have Experience in operating Mobile banking before	39	61	00
Do you have any interest to enroll for Mobile banking?	72	17	11
Would you use MB if you are able to do so?	83	06	11

**Table-2: Respondents learning1**

Questions	Respondents learning From (%)				
	Advt.	Bank (personal)	Internet	Family	Bank (Boucher)
How do you know about mobile banking?	28	22	32	33	21

**Table-3: Respondents learning2**

Questions	Respondents learning From (%)				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
I am familiar with checking my account balances through my mobile device.	16	34	14	05	01
I am familiar with obtaining financial information through my mobile device.	11	43	17	08	01
I am familiar with paying bills through my mobile device.	08	23	24	11	04
I am familiar with money transfer facility through my mobile device.	08	32	15	15	00
familiar with sending a request for issue of cheque book through my mobile	05	29	27	08	01

**Table-4: Cross Tabulation**

<b>Age * Have_experience_in_MB Crosstabulation</b>				
Count		Have_experience_in_MB		Total
		Yes	No	
Age	18-25 yrs	15	21	36
	26-30 yrs	9	13	22
	31-35yrs	2	2	4
	36-40 yrs	0	3	3
	41-45 yrs	1	2	3
	50 years & above	0	2	2
Total		27	43	70

**Table-5: Frequency in using Mobile Banking**

<b>Have experience in MB * What is your frequency in using Mobile Banking Cross tabulation</b>								
Count		What is your frequency in using Mobile Banking						Total
		Once in a week	Once in 2 week	Once in 3 weeks	Once in a month	None	Others	
Have_experience_in_MB	Yes	9	5	2	5	5	1	27
	No	2	3	1	4	32	1	43
Total		11	8	3	9	37	2	70

15 Consumer in the age group of 18 -25 years have experience in mobile banking but 21 consumers in that age group does not have experience in operating mobile banking. That means banks must put in more efforts to educate their customers in mobile banking.

From the above tabulation it can be said that consumers who are using mobile banking service are using it frequently.

**FACTOR ANALYSIS**

To find out variable which help in determining consumer perception & awareness about mobile banking?

To find above, we will use factor analysis as it is a useful method of reducing data complexity by reducing the number of variables. It consists of 2 stages here

21 variables are taken into consideration.

Stage 1: To identify how many factors are to be extracted from the data.

- I. Total Variance Explained – It states that there are 7 factors extracted together which accounts for 72.696 % of the total variance. This is a good deal because with only 7 factors (reducing

them from 21) we have lost only 28% of the information content, while 72% is retained by the 7 factors extracted out of 21 original factor.

**Table-6: Total Variance**

Component	Total Variance Explained		
	Rotation Sums of Squares Loadings		
	Total	% of Variance	Cumulative %
1	2.891	13.766	13.766
2	2.636	12.552	26.318
3	2.289	10.900	37.218
4	2.223	10.588	47.806
5	1.822	8.674	56.480
6	1.759	8.378	64.858
7	1.646	7.838	72.696

Extraction Method: Principle Component Analysis

**Stage 2** – To interpret and the name the extracted factors. By identifying which factors are associated with which of the original variables – Rotation Factor Matrix.

**Table-7: Rotated Component Matrix**

Rotated Component Matrix	Component						
	1	2	3	4	5	6	7
Know_MB_in_India	.132	.089	.073	-.017	.065	.018	.853
Heard_Of_MB	-.030	.033	-.058	.171	-.017	-.017	.885
Interested_enrolingMB	.179	.134	.204	-.191	.767	.102	.014
Would_use_MB	.106	.155	-.148	.226	.802	.089	.031
MB_would_be_useful_in_conducting_banking_transactions	.528	.432	-.064	.110	-.093	.209	.185
Think_MB_enable_conducting_banking_transactions_quickly	.757	.181	.076	-.062	-.015	.370	.022
If_adopted_MB_it_is_more_effective_way_fortransactions	.824	.054	-.007	.061	.198	.081	-.002
MB_would_give_me_greater_control	.582	-.170	.066	.297	.373	-.193	.188
MB_is_clear_and_understandable	.159	.700	.225	.244	.193	-.085	.069
It_is_or_would_be_easy_for_me_to_be_proficient_with_MB	-.025	.755	.231	.017	.168	.281	.084
It_would_be_easy_to_do_what_I_want_to_do_using_MB	.408	.478	-.117	.087	.096	.459	.072
MB_services_would_or_do_meet_my_needs	.212	.620	.205	.147	.349	-.169	-.027
Think_possible_to_conduct_banking_my_Choice	.596	.375	.373	.082	.209	-.299	-.078
I_believe_MB_providers_are_honest	-.015	.147	.875	.203	.018	.158	.012
I_believe_MB_providers_r_trustworthy	.067	.111	.863	.258	.018	.132	.014
I_believe_that_my_transactions_with_MB_providers_are_safe	.356	.062	.349	.398	.171	.514	-.103
I_trust_MB_providers_because_they_keep_my_best_interests_in_mind	.118	.048	.261	.141	.083	.855	.002
I_find_MB_very_useful	.756	.214	.203	-.181	.212	.011	.130
I_like_the_flexibility_it_offers_me_to_do_my_banking_transaction	.152	.246	.338	.655	.075	.155	.095
I_prefer_MB_over_visiting_bank	.293	.175	.176	.702	-.195	.146	.034
I_think_MB_is_a_convenience_service	.131	.638	-.132	.352	-.186	.137	.028



### *Analysis*

1. *Factor 1:* Rotated factor matrix the variable of no. 5,6,7,8, 13, 18 have factor loadings of 0.528, 0.757, 0.824, 0.582, 0.596, 0.756 respectively.

Thus factor 1 named as 'Usefulness of M-Banking' consists of

- 1) Think MB enable conducting banking transactions quickly
- 2) MB would be useful in conducting banking transactions
- 3) If adopted MB it is more effective way for transactions
- 4) MB would give me greater control
- 5) Think possible to conduct banking my Choice
- 6) I find MB very useful

2. *Factor 2:* Rotated factor matrix the variable of no. 9,10,11,21 has factor loading values 0.700, 0.755, and 0.478 respectively.

Thus factor named as 'Ease of Use of M-Banking' which consists of

- 1) I think MB is a convenience service
- 2) MB is clear and understandable
- 3) It is or would be easy for me to be proficient with MB
- 4) It would be easy to do what I want to do using MB

3. *Factor 3:* Rotated factor matrix the variable of no. 14, 15 has factor loading values 0.875, 0.863 respectively.

Thus factor can be named as 'Trust on banks' which consists of

- 1) I believe MB providers are honest
- 2) I believe MB providers are trustworthy

4. *Factor 4:* Rotated factor matrix the variable of no. 3, 4 has factor loading values 0.767, 0.802 respectively. Thus factor named as 'Interest in using M-banking' which consist of

- 1) Interested enrolling MB
- 2) Would use MB

5. *Factor 5:* 'Consumer Awareness of M-Banking' consist of

- 1) Know MB in India
- 2) Heard Of MB

### *CHI – SQUARE TEST-*

*Hypothesis 1:* Consumer awareness has significant impact on interest to use M-Banking

H0–There is no significance impact of consumer awareness on interest to use M-Banking.

H1–There is a significance impact of consumer awareness on interest to use M-Banking.

**Table-8:** Know MB and Interested enrolling MB in India

<b>Know_MB_in_India</b>			
	<b>Observed N</b>	<b>Expected N</b>	<b>Residual</b>
Yes	69	35.0	34.0
No	1	35.0	-34.0
Total	70		
<b>Interested_enrolingMB</b>			
	<b>Observed N</b>	<b>Expected N</b>	<b>Residual</b>
Yes	50	23.3	26.7
No	12	23.3	-11.3
Uncertain	8	23.3	-15.3
Total	70		
<b>Test Statistics</b>			
	<b>Know_MB_in_India</b>	<b>Interested_enrolingMB</b>	
Chi-Square	66.057 <sup>a</sup>	46.057 <sup>b</sup>	
Df	1	2	
Asymp. Sig.	.000	.000	
a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 35.0.			

The table above shows that Chi Square value of 66.057(DF=1, N=70),  $p < 0.01$  is significant at 1 degree of freedom, showing that there is significant difference in expected and observed frequencies. As such Null hypothesis is rejected and alternate hypothesis is accepted, that is there is significant impact of consumer awareness on interest to use M-Banking.

*Hypothesis 2:*-Usefulness of M-Banking significant impact on the interest to use M-banking.

H0 – There is no significance impact of usefulness of M-Banking on interest to use M-Banking.

H1 – There is significant impact of usefulness of M-Banking on interest to use M-Banking.

**Table-9:** Adopted MB and use MB for transactions

<b>If_adopted_MB_it_is_more_effective_way_for_transactions</b>			
	Observed N	Expected N	Residual
1	15	17.5	-2.5
2	37	17.5	19.5
3	15	17.5	-2.5
4	3	17.5	-14.5
Total	70		
<b>Would_use_MB</b>			
	Observed N	Expected N	Residual
yes	58	23.0	34.0
no	4	23.0	-19.0
uncertain	8	23.0	-15.0
Total	70		
<b>Test Statistics</b>			
	If_adopted_MB_it_is_more_effective_way_fortransactions	Would_use_MB	
Chi-Square	34.457 <sup>a</sup>	75.739 <sup>b</sup>	
Df	3	3	
Asymp. Sig.	.000	.000	

The table above shows that Chi Square value of 34.475(DF=3, N=70),  $p < 0.01$  is significant at 1 degree of freedom, showing that there is significant difference in expected and observed frequencies. As such Null hypothesis is rejected and alternate hypothesis is accepted, that is there is significant impact of usefulness of M-Banking on the interest to use M-Banking.

*Hypothesis 3* - Ease of use of M-Banking has significant impact on the interest to use M-Banking.

H0 – Ease of use of M-Banking has no significant impact on the interest to use M-Banking.

H1 – Ease of use of M-Banking has significant impact on the interest to use M- Banking.

**Table-10: Proficient with MB**

<b>It_is_or_would_be_easy_for_me_to_be_proficient_with_MB</b>			
	Observed N	Expected N	Residual
1	11	17.5	-6.5
2	38	17.5	20.5
3	19	17.5	1.5
4	2	17.5	-15.5
Total	70		
<b>Would_use_MB</b>			
	Observed N	Expected N	Residual
yes	58	23.3	34.7
no	4	23.3	-19.3
uncertain	8	23.3	-15.3
Total	70		
<b>Test Statistics</b>			
	It_is_or_would_be_easy_for_me_to_be_proficient_with_MB	Would_use_MB	
Chi-Square	40.286 <sup>a</sup>	77.600 <sup>b</sup>	
df	3	3	
Asymp. Sig.	.000	.000	
a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 17.5.			

The table above shows that Chi Square value of 40.286(DF=3, N=70),  $p < 0.01$  is significant at 3 degree of freedom, showing that there is significant difference in expected and observed frequencies. As such Null hypothesis is rejected and alternate hypothesis is accepted, that is there is significant impact of ease of use of M-Banking on the interest to use M-Banking.

### Conclusion

1. Majority of consumers are aware that mobile banking is now available in India. But very few are familiar with various banking transactions that we can do with the help of Mobile banking.
2. Majority of consumers have heard about mobile banking before.
3. Though majority of consumers are aware about mobile banking very few have actually used mobile banking.
4. Consumers often come to know about new products or services through unofficial channels like friends, family, colleagues & through internet. Thus word of mouth is a termed as strong

communication channel. This point is proved again since majority of consumers have heard about mobile banking from their friends, family, colleagues & internet. Thus banks are lagging behind in this area.

5. Consumers in the age group of 18 – 25 years are the ones to adopt mobile banking. In all other groups there is less acceptance of mobile banking.
6. The factors like usefulness of mobile banking, ease of use of mobile banking, awareness of mobile banking & interest in using mobile banking can be used understand consumers perception about mobile banking; thus they can be useful to increase the reach of this banking service. Deep study around these factors can help in increasing more awareness about mobile banking.
7. Consumer awareness has significant impact on interest to use in mobile banking. Consumers are interested because they have heard about it from somewhere & think that M-Banking will allow them to do banking transactions anytime.
8. There is significant impact of usefulness of M-Banking on the interest to use M-Banking. Thus if banks take more efforts in reaching to consumers & give information about mobile banking then more consumers will use mobile banking. Mobile banking will also reduce the cost of banks.
9. There is significant impact of ease of use of M-Banking on the interest to use M-Banking. Technology is now enabling consumers to do their banking transactions just by clicking some buttons on mobile or by sending SMS. So this is acting as a pull factor to increase adoption of mobile banking.

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