FACTORS AFFECTING ADOPTION OF MOBILE BASED INTERNET BANKING IN EMERGING MARKET: A STUDY OF THE INDIAN CONSUMERS' OBSERVATION

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Abstract

Banking and communication are two of the fastest growing industries in India. There has been a very high penetration of the banking in the last ten year which leads to the high customer load in banking industry. Therefore, to handle this customer load banks are adopting different strategies and technologies. Mobile based Internet banking is one of the main strategy adopted by the banks. There is a need to identify the perception of the customer groups about mobile application based internet banking. Simple descriptive statistical techniques and ANOVA are used to analyze it.

INTRODUCTION

Banking and communication are two of the fastest growing industries in India [1]. According to TRAI [2], there were a total of 254.4 Million Internet Subscribers in India in 2014, with 20.39 subscribers per 100 people. On the other hand, there has been much customer load in the banking industry in recent times with 116450 scheduled commercial banks in 2014. As customers load increases, banks adopt different novel strategies and technologies. The Internet has led to a revolution in the global banking sector [3] and it is advantageous for both consumers as well as the banks [4]. In the present scenario, internet is a prerequisite for the banking sector and the scope for mobile and internet banking is big [5]. According to Jeon and Rice, it is possible to offer 24 hour services through internet banking, which makes it easy for the customer to avail banking services at odd times. From the banks' prospective, e-banking is cost effective with lower operational costs through the reduction of physical facilities and staff [6]. Another important benefit from e-banking is the development of a more useful information collection and management system [7]. Banks are regularly trying to encourage their customer to use mobile based internet banking and avail banking facilities anywhere and anytime. Mobile based internet banking is in the initial phase and customers do not have very clear perception about Mobile based internet banking. On some factors they consider it is very effective but on the other hand, there are some differences in perception about internet banking. Adoption of internet banking is influenced by demographic factors like age, education, income, occupation and gender [8] and other factor like risk involvement in internet banking. Lichtenstein et al. [9] argued that internet banking customers have high risk with regards to internet banking and the growing importance of offering deep levels of consumer support for such services. Lee [10] suggests that online banking companies could develop trust-building mechanisms to attract customers. Most of the customers use mobile based internet for money transfer and online shopping. With intensive banks competition and the popularity of the mobile device, there is an urgent need to understand the factors that would lure customers to adopt Mobile banking. In the present study customer's perception of different customer group about mobile based internet banking is investigated under four broad factors (1) encouraging and discouraging factors to adopt mobile based internet banking, (2) Service promptness factors, (3) Risk factors and (4) Utility factors. Under each broad factor, there are sub factor such as in the first factor, the different sub factors are: (1) Peer group encouragement for availing the service (2) More satisfactory than the traditional banking (3) Easily available Information about MBIB (4) High Cost of availing and (5) simple to use banking Mobile Application. In the second category of broad factor, the sub factors are (1) High accessibility increases its adoption, (2) avoid going to the branch and standing in queue and (3) Saves time than the traditional banking. In the third broad factor, the sub factors are (1) Speed of internet affects the services (2) Services are as much trustworthy as traditional banking services

and (3) Potential risk of failed transactions and inconveniences. In the fourth category, the sub factors are (1) Mostly used for fund transfer (2) Mostly used for bill payment and (3) Mostly used for online shopping. Thus, understanding the essentials of factors that determine user Mobile banking adoption can provide great management insight into developing effective strategies to remain competitive and hold market share [11].

CONCEPTUAL FRAMEWORK

There are several factors that can affect any service in use. In the present study user's perception about mobile based banking is analyzed on different parameters. These parameters are: Encouraging factors to avail the service; Services promptness factors; Risk factors in using service; and Utility factors. Mostly use of any service moves around these aforementioned factors. An understanding of users' perception about mobile application based banking becomes crucial to guide banking as well as telecommunication companies to make proper strategies and include specific features in services to satisfy customers. Considering the limited mobile application based banking, especially in context of India, the present study becomes significant. In the present study users' overall perception and perception from different demographic factors like gender, occupation and age are taken.

OBJECTIVE OF THE STUDY

The present study primarily aims at examining the important factors in using and adopting mobile application based banking. Specific objectives of the study are as follows:

- To analyze the perception of different customer groups about mobile application based internet banking.
- To suggest the effective model design to the service providers as per the need of the customers.

DATA AND METHOD

Data Collection

Present study is based on primary data. A primary survey of 185 respondents belonging to Ludhiana district of Punjab has been conducted by using structured questionnaire. Only mobile based e-banking users have been taken in the study. Primary data is collected through structured questionnaire and some secondary data is taken from different authentic and reliable sources like Ministry of Telecommunication and Broadcasting. The questionnaire is divided into two parts. In the first part personal information has been collected and in the second part questions related to perception and utilities of mobile based e-banking have been asked from the respondents.

Data Analysis

Primary survey data has been analyzed using simple statistical techniques viz. descriptive statistics and Analysis of Variance (ANOVA).Responses on the Perception were recorded on a five-point Likert scale ranging from 1-5, where 1 means strong disagreement and 5 means strong agreement on different factors of mobile based E-banking. In order to examine perception on Encouraging factors, Services promptness factors, Risk factor and Utility factors across the age, occupation and gender, the data has been analyzed through ANOVA (Table 1).

PROFILE ANALYSIS OF RESPONDENT

Table 1: Profile Analysis of Respondent.

Particular	N	%	Particular	N	%
Age of the Respondent					
18 to 25 year	145	78.4	**Gender**		
more than 25 year	40	21.6	male	147	79.5
Using Exp.			female	38	20.5
Less than a year	74	40	**Occupation**		
1-2 year	71	38.4	student	136	73.5
More than 2 year	40	21.6	services class	37	20
Internet connectivity used			Self employed	12	6.5
2G	52	28.1	**Source of information**		
3G	89	48.1	Bank Branch	90	48.6
Wi-Fi	34	18.4	Advertisement	55	29.7
Broadband	10	5.4	Friends and others	40	21.6

In the given table, summary of age, gender, occupation, vintage, Internet connectivity used and source of information of the 185 respondent is given. Most of the respondents are in the age group of 18 to 25 year [12]. Findings reveal that majority of Internet users are youths and young adults and most of the smart phone users are also from the same age group (Nielsen informate mobile insight, 2012). Only 21% respondents are more than 25 year old. It indicates that most of the young generations are adopting mobile based e-banking. In the present sample, 79.5% of the respondents are male, the results is same as Apurva Singh. Majority of mobile based E-banking users are students followed by the service class (20%). As far as experience of internet banking is concerned, 40% of respondents has experience less than one year, 38.4% has 1-2 years' experience only, 21.6% respondents have more than 2 year experience of using internet banking. Reason may be that in the present scenario, banks are becoming much more concerned about internet banking as compared to before. Online shopping concept and payment through internet banking has now become fashion, and hence, internet banking is gaining popularity. According to RBI Report 2014, there has been significant growth in the volume this year as compared to previous years. Internet

connectivity is the main factor in the use of internet baking.3G speed is the highest speed available for Smartphone in India. Nearly half of the respondents are using 3G connectivity followed by 2G connectivity. Only 18.4% mobile based e-banking users are connect through Wi-Fi. Now it is not very hard to get information about mobile based e-banking.48.6% of customers get information from the concern bank branch since the banks want to reduce their physical workload and so they promote customers for internet banking. Advertisement is another big source of information about internet banking. Private bank especially ICICI advertises its internet banking regularly.

RESULTS AND DISCUSSION

Age is one of the characteristics that may affect the customer's perceptions and evaluation of the service and consumer satisfaction [13]. There are two categories of age, one is below 25 year and another is above 25 year. There may be many encouraging factors in the adoption of mobile based e-banking. According to Quigley [14], Peer group is an important factor in the decision making. (F=26.46,P<0.01) indicates that there is a significant difference in the influence by the peer group in encouraging for availing mobile based e-banking service. Youngsters are more influenced by their peer group. Mean value (4.01) of the age group less than 25 year indicates that they consider Mobile Based Internet Banking more satisfactory than traditional one as compare to the age group above 25 year and ANOVA is also reflecting significant difference (F=20.82, P<0.01).F-test shows the significant difference in the information availability. Youngsters reported that information is easily available as compare to the age group above 25 year. It is pre-expected that there is no difference in cost of availing Mobile Based Internet Banking across age groups and respondents assume that it is not high. There is no significant difference in the perception that banking mobile application is simple to use. Singhal et al. [15] also observes that internet banking is simple to use. Service promptness has always been a factor of consideration and people are much concerned about it. Easy availability of Mobile Based Internet Banking has increased its adoption but mean value indicates that people below 25 year age have more access as compare to those above 25 year and have significant difference in the accessibility for adoption. There is strong agreement that mobile based e-banking saves time and people use it to avoid going to the branch and standing in queues, thereby saving time than the traditional banking and no significant difference was found in between both age groups (Table 2).

To gauge risk, it is important to know about the perception of any service specially if the service is related to banking. Mean value 4.48 and 4.42 of speed of internet affect the services, indicating that both the age group users perceive very high risk of internet speed and ANOVA shows that there is no significant difference between both the age groups on this aspect. Similarly, no significant difference was found on the perception of potential risk of failed transaction and inconvenience in Mobile Based Internet Banking. But significant difference (F=8.86, P<0.05) is found in Services trustworthiness as traditional banking services. Younger people consider that Mobile Based Internet Banking as trustworthy likes traditional banking but respondents above 25 year are not having the same perception.

Table 2: ANOVA-Age groups and factors.

Age	<25 year	>25=2 year	F-value
	Mean	Mean	
Encouraging Factors			
Peer group encourage for availing the service	4.15	3.28	26.46
More satisfactory than the traditional banking	4.01	3.2	20.82
Information about MBIB is easily available	4.02	3.15	17.53
Cost of availing is high	2.84	2.55	1.82
banking Mobile Application is simple to use	4.34	4.20	0.92
Services Promptness Factors			
Due High accessibility increases its adoption	4.06	3.80	3.26
Used to avoid going to the branch and standing in queue	4.47	4.4	0.27
Saves time than the traditional banking	4.36	4.43	0.23
Risk Factors			
Speed of internet affects in services	4.48	4.42	0.35
Services are as much trustworthy as traditional banking services	4.07	3.45	8.86
Potential risk of failed transactions and inconveniences	3.36	3.57	1.10
Utility Factor			
Mostly used for fund transfer	3.81	3.7	0.33
Mostly used for bill payment	3.68	3.42	1.29
Mostly used for online shopping	4.16	3.67	6.67

There are three variables taken in the utility factors viz. fund transfer, bill payment and online shopping. There was no significant difference in using Mobile Based Internet Banking for fund transfer and bill payment and respondent give agreement that mostly they use Mobile Based Internet Banking for funds transfer and bill payments. As far as online shopping is concerned there was significant difference in using Mobile Based Internet Banking for online shopping. Respondents belonging to the lower age group are using Mobile Based Internet Banking for more online shopping as compare to upper age group (Table 3).

According to Venkatesh et al., gender has been an influencing factor in the adoption of internet banking and they argued that the internet usage for mobile banking is male dominated. High mean value 3.97 for male and 3.92 for female indicates that peer group encourage for availing Mobile Based Internet Banking. But no significance difference is found across the gender. Similarly both genders found that Mobile Based Internet Banking is more satisfactory than traditional banking. As far as availability of information about MBIB is concerned, males are more informed and consider that Information is easily available as compared to females and this perception difference is significant by ANOVA (F=3.07, P<0.01). F-test shows (F=3.93, P<0.05) which indicates that there is a significant difference in the perception that Mobile banking application is simple to use. More males agree that banking Mobile application is simple to use as

compare to females. Mean value for males is 4.37 while mean value for females is 4.08 which is indicating that males consider MBIB easy to use as compare to females, which was also found by Venkatesh et al. On the risk factors, males and females have same perception except on speed of internet affecting the services issue. Both consider it as trustworthy as traditional banking services but have Potential risk of failed transactions. Like age, there was no significant difference on the utility concept and use of MBIB for fund transfer and bill payment (Table 4). As far as the use of MBIB for online shopping is concerned, there is significant difference across the gender (F=3.03, P<0.01). Males use more MBIB for online shopping as compare to females.

Table3: ANOVA - Gender and factors.

Gender	Male	Female	F-value
	Mean	**Mean**	
Encouraging Factors			
Peer group encourage for availing the service	3.97	3.92	0.08
More satisfactory than the traditional banking	3.88	3.63	1.78
Information about is easily available	3.91	3.53	3.07
Cost of availing is high	2.78	2.74	0.04
banking Mobile Application is simple to use	4.37	4.08	3.93
Services Promptness Factors			
Due High accessibility increases its adoption	3.99	4.05	0.16
Used to avoid going to the branch and standing in queue	4.46	4.45	0.00
Saves time than the traditional banking	4.39	4.34	0.13
Risk Factors			
Speed of internet affects in services	4.52	4.32	3.34
Much trustworthy as traditional banking services are	3.94	3.68	1.72
Potential risk of failed transactions and inconveniences	3.40	3.45	0.05
Utility Factors			
Mostly used for fund transfer	3.78	3.84	0.11
Mostly used for bill payment	3.68	3.39	1.61
Mostly used for online shopping	4.13	3.79	3.03

Table 4: ANOVA-Occupation groups and factors.

Occupation	Student	Services class	Self employed	F-value
	Mean	**Mean**	**Mean**	
Encouraging Factors				
Peer group encourage for availing the service	4.13	3.59	3.17	8.636
More satisfactory than the traditional banking	4.00	3.51	2.92	8.815

Information about MBIB is easily available	3.99	3.59	2.83	6.166
Cost of availing is high	2.83	2.68	2.42	0.827
banking Mobile Application is simple to use	4.31	4.32	4.25	0.038
Services Promptness Factors				
Due High accessibility increases its adoption	4.08	3.89	3.50	3.31
Used to avoid going to the branch and standing in queue	4.46	4.43	4.50	0.039
Saves time than the traditional banking	4.35	4.51	4.25	1.011
Risk Factors				
Speed of internet affects in services	4.51	4.38	4.42	0.711
Services are as much trustworthy as traditional banking services	4.01	3.65	3.25	4.034
Potential risk of failed transactions and inconveniences	3.39	3.51	3.33	0.207
Utility Factors				
Mostly used for fund transfer	3.82	3.78	3.42	0.746
Mostly used for bill payment	3.62	3.81	3.08	1.58
Mostly used for online shopping	4.17	3.65	4.08	3.476

Previous studies [16,17] show that those who belong to upper and middle class and have high level occupations are more likely to use internet banking. Nasri [18], found that demographic factors impact significantly on internet banking behavior, specifically, occupation is one of the important factor among them. From the Table 4, it is revealed that students are more encouraged by their peer group for availing the MBIB services. They are followed by service class and self-employed and this difference is significant from calculation of analysis of variance significant (F=8.636, P<0.001). Similarly, there is significant difference on satisfaction than traditional banking (F=8.815, P<0.001) and information accessibility (F=6.166, P<0.001) across the occupational group. As expected, cost of availing is same for all occupations but as compared to other two groups, students have a perception that cost of availing is high. As far as service promptness factors are concerned, there was a significant difference in the perception that high accessibility increases its adoption (F=3.31, P<0.05).Students consider that high accessibility increase its adoption and mean value 4.08 indicates that they very much agree on this issue. But another service promptness factors like Used to avoid going to the branch and standing in queue and Saves time than the traditional banking, no significant difference is found across the occupation group. On the matter of risk factors there was no significant difference on the perception that Speed of internet affects in MBIB service and high mean value (4.51, 4.38 and 4.42) for student, service class and self-employed respectively reveals that speed of internet is big issue of concern. F-test (F=4.03, P<0.05) indicates that the significant difference across the occupational group on the perception that MBIB are as much trustworthy as traditional

banking services. Students mean values indicate that they consider MBIB as trustworthy as traditional banking services. Service class people have a high perception that there is a potential risk involved in failed transactions as compare to student and self-employed. There is no significant difference in the utility pattern of MBIB across the occupational group while a significant (F=3.47, P<0.05) difference is found in using pattern for online shopping. Students use MBIB more for online shopping followed by self-employed and service class respectively.

CONCLUSION AND SUGGESTION

In the present era banking and communication are two fastest growing industry. In the present scenario based internet banking in the initial phase customer does not have very clear perception about it and it is influence by demographics factor like age, education, income, occupation and gender. From the above it is find out that Majority of Internet banking users are youth and get information about internet banking from the branch. Youth are more sensitive about mobile based internet banking at the parameters. Youngsters are more influence by their peer group. People more than 25 year do not consider internet banking trustworthy as compare to youngsters. Female are less informative but both gender found that MBIB is more satisfactory than the traditional banking. Due to various benefits like to avoid going to the branch and standing in queue and wastage of time in traditional banking, it is consider that MBIB is more convenient and useful than traditional banking services.

To amplify the penetration of mobile based internet banking banks should try to attract mature age group. Make internet banking system easy to understand for them. A simple training should be given to the customer for use first time. Encourage female participation by offering schemes. Mean score of self-employed is not good sign. They are wealthy customer. Make easy procedure to add payee and offer some discount and rewards point to attract the business class customer. Intensive advertisement is still required to bring it in fashion.

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