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Opportunities And Challenges On The Adoption Of Mobile Banking Services

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Abstract

Digitalisation and advancement in mobile technology possess many challenges and opportunities to the banks. This study examines the adoption behaviour of of users and non-users of Mobile Banking in India and also identifies opportunities and challenges associated with the adoption of mobile banking. This work assesses performance expectation, effort expectancy, social influence, facilitating conditions, behavioural intention, and trust to impediments such as perceived risk. The paper discusses both opportunities and challenges. The study has found that young, female educated private sector bank respondents are major users of Mobile banking services. ANOVA result demonstrates a significant difference between users and non-users. Ease of Use (Effort Expectations) is marginally but significantly lower among non-users. The most important challenge in the adoption of MB services are trust and perceived risk. Customers become more receptive to MB services when they discover a lack of complexity. Banks should place a premium on conveying the relative benefits of using MB services and on providing user-friendly MB services. Raising awareness of the benefits and ease of usage is both a significant task and an opportunity. Peer influence and offering MB services lower end handsets will create greater opportunity for the adoption This study's conclusions have significant ramifications for banks, financial institutions, and wireless telecommunications service providers.

Key Words: Mobile Banking, Adoption, UTAUT, Challenges and Opportunities.

1. Introduction

The banking industry has expanded substantially as a result of rapid improvements in digitisation, mobile technology, and devices, and now provides services anywhere and at any time. While the availability of smart phones has fuelled demand for mobile banking, there are challenges, most notably privacy and security concerns. Despite advancements in technology, humans continue to be the weakest link due to security concerns (Tam et al. 2010). Banks and mobile service providers have been attempting to gain a better understanding of client concerns regarding the adoption of mobile banking, as the banking industry has enormous revenue opportunities and potential.

Additionally, the literature indicates that unless the user's unique demand is met, the user will be unwilling to depart from their current, accustomed ways of doing things. Previous research has found that customers' adoption of new technologies is a complex phenomenon that requires distinct models for different product situations. By applying this to mobile banking, they are able to identify the opportunities and challenges associated with the adoption of new technologies, particularly mobile banking. Although mobile banking services are increasingly being used for banking applications, few empirical studies on mobile banking services have been done. The overwhelming majority of recent investigations have been undertaken in wealthy nations. As a result, our current understanding of this subject is context-dependent, limiting our understanding of human behavioural phenomena to research undertaken in industrialised countries.

The fundamental motives for this study are twofold: first, despite the increased availability of mobile banking services, they have not been utilised as widely as anticipated. By examining the adoption behaviours of users

and non-users, this research identifies opportunities and challenges to mobile banking service adoption.

2.1 Objective of the study

The purpose of this study is to add to the Mobile Banking literature by shedding light on the behavioural aspects of Mobile Banking usage. The objectives of this paper is to look into the characteristics and attitudes of users and non-users of Mobile Banking (MB) in India, which is the largest market and has been identified as an emerging market.

More specifically, the objectives of this study are three-fold:

- ✓ to provide insights into the demographic characteristics of users and non-users of MB.
- ✓ to compare the attitudes of users and non-users of MB on an identified set of factors
- ✓ to discover the opportunities and challenges in the adoption of Mobile Banking Services

3.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

Viswanath et al., (2003) Viswanath et al. (2003) developed the UTAUT to better understand user acceptability and use of technology. The Theory of Planned Behavior, the Diffusion of Innovation Theory, and the Social Cognitive Theory have all been used to establish the theory. Each of the four major constructs of the original UTAUT is described below. Performance expectancy, effort expectancy, and social influence all influence behavioural intention, whereas facilitating factors directly influence behavioural intention and use behaviour (Viswanath et al., 2003). The UTAUT paradigm looks beyond intention to comprehend actual use, as there is a big difference between the two (Martins et al., 2014).

The purpose of this study, which is based on the UTAUT, is to determine the factors that influence the acceptance of MB services. The report discusses both opportunities and challenges. Thus, researchers assess UTAUT antecedents such as performance expectation, effort expectation, social influence, facilitating conditions, behavioural intention, and trust to impediments such as perceived risk.

3.3. Behavioural intention (BI)

The likelihood that users will engage in a particular behaviour is referred to as behavioural intention (Ajzen, 1991). More use of a technology could result from a larger behavioural intention for it. In the earlier technology adoption literature, several research revealed a favourable link between behavioural intention and actual use. Behavioral intention has a favourable impact on use behaviour, according to Amirtha et al., (2021). Indeed, according to Venkatesh et al., (2012), there is a considerable discrepancy between a person's intention to utilise technology and their actual use of it. As a result, understanding the link between behavioural intention and actual usage behaviour is crucial. Given that the purpose of this study is to go beyond previous research and discover antecedents to actual MB service use, it's critical to investigate the link between behavioural intention and actual use behaviour. Based on the study's focus and preceding theoretical findings, we hypothesise that:

Hypothesis H1: There exist difference in behavioural intention between users and non-users of Mobile banking services.

3.4. Performance expectancy (PE)

Performance expectation refers to the extent to which a technology benefits users when they do specific tasks (Venkatesh et al., 2012). While MB provides benefits like as convenience, 24/7 access to financial services, and shorter transaction times (Demirgüç-Kunt et al., 2017), its performance potential as a business prospect has not been completely explored in study. As a result, it is vital to ascertain whether employees view performance expectations as an opportunity or a constraint. As a result of this, the study advances the following hypothesis:

Hypothesis H2. Performance expectancy among users and non-users are not different on Mobile Banking services.

3.5. Effort expectancy (EE)

Effort expectation is a measure of how easy it is for people to use a technology (Venkatesh et al., 2012). Effort expectancy measures how difficult or simple it is to utilise a given piece of technology. Consider people's ability to use it as an opportunity, rather than a challenge, while designing the system. Chauhan, (2015); Liébana-Cabanillas et al., (2019); Viswanath et

al., (2003). Consequently, it is imperative to determine the relationship's future. As a result, the following theory is proposed:
Hypothesis H3. Effort expectancy are not different among users and non-users of Mobile banking services.

3.6. Social influence (SI)

How much a user is influenced by others, such as family and friends, when deciding to utilise a technology is known as "social influence" (Venkatesh et al., 2012). It is not uncommon for technology users to be influenced by the opinions of their social networks. Because of the power they hold, influential people can have a significant impact on the opinions of others. As pointed out by Oliveira et al., (2016)Abbas et al., (2018); Alalwan et al., (2018); Laukkanen, (2016); Patil et al., (2020) in their studies on technology adoption, social impact can have a substantial effect on the adoption of an innovation. Social influence in the context of MB services is concerned with whether or not the perception of close associates influences users' decisions about whether or not to use the technology. Accordingly, this study offers that:

Hypothesis H4. Social influences are not different among users and non-users of Mobile banking services

3.7. Facilitating conditions (FC)

Facilitating conditions are defined as a customer's perception of available support and resources when using a technology " (Venkatesh et al., 2012). Convenient conditions can either be an opportunity to use MB services or a hindrance to doing so. As a result of the availability of facilitating conditions, increased interest in and subsequent use of MB services may occur. Globally mobile phone penetration is increasing, which is a necessary enabler for the use of MB services. Previous research has found that facilitating conditions have a positive influence on technology use intention. Following previous research, this study proposes that the availability of facilitating conditions such as digital devices such as mobile phones, access to mobile network services, and other people's support will lead to increased intention and use of MB services. As a result, the following research hypotheses is framed:

Hypothesis H5. There is exist difference in the facilitating conditions for mobile banking services between users and non-users.

3.8. Trust (TR)

According to Plank et al. (1999), service trust is a belief in the service's ability to meet consumer expectations. The biggest problem is that because of the virtual nature of MB services , there are inherent trust concerns. As a result of the tendency to lose money, a considerable percentage of consumers still refuse to use mobile banking services because of service trust difficulties (Grohmann et al., 2018). On this premise, the following hypotheses are put forth:
Hypothesis H6. Mobile banking users and non-users have differing levels of trust in the service.

3.9. Perceived risk (PR)

Perceived risk refers to the perception of losses associated with the use of a technology (Featherman & Pavlou, 2003). Most technologies have inherent risks due to the virtual nature of interactions (Ariff et al., 2014). Similarly, when using MB services, there is an inherent risk of losing financial assets. As a result, users are sceptical of utilising MB services. In the digital environment, the cost of perceived risk includes many factors such as privacy, financial, time, and opportunity cost (Featherman & Pavlou, 2003). Given that people's trust in a technology and its providers is influenced by perceived risk, understanding the underlying mechanisms of these relationships is critical. As a result, in this study, the following hypothesis is proposed:
Hypothesis H6. The Perceived risk differs between users and non-users of mobile banking services.

4. Methodology and data collection

4.1 Research Design

The research design used in this study is exploratory and empirical in character, using a descriptive approach.

4.2. Development of a survey instrument

A survey instrument has been created for this study based on a literature review. The survey is conducted using a self-administered two-part questionnaire. There is a first component of the

questionnaire that asks for demographic information. In order to identify if respondents are MB users or non-users, a dichotomous query has asked. The use of the same questions on MB users and non-users has been previously supported by research (Lin, 2011). Data on factors that influence MB adoption, such as performance expectancy (PE), effort expectancy (EE), social influence, facilitating conditions (FC) and trust (TR), have been collected in the second section of the instrument. Every response is given a Likert scale value from 1 to 5, with 1 being "strongly disagree" and five (5) being "strongly agree". Finally, 20 randomly chosen participants are used to conduct a preliminary evaluation of the instrument. Clear and valid survey instruments are ensured by this procedure. As a result of feedback, three items have been reworded in order to clarify their meaning.

4.3. Data Collection

To generalise, sufficient data representative of the population has been collected, and an approach consistent with the research methodology has been chosen. Convenience sampling is being used. This method has been chosen for two reasons: one, to generalise from a sample, and two, to save time. It enables the quick and easy evaluation of various aspects of a population at a single point of contact. There have been 100 responses.

5. Data Analysis and Results

The data is analysed using descriptive and ANOVA methods. Section 5.1 presents the findings of a descriptive attributes respondents' demographic characteristics. Sections 5.2 and 5.3 show the results of the ANOVA analysis. SPSS vr.26 software is used for the analysis.

5.1 Demographics in usage of MB

Table 1 summarises the demographic features of MB users and non-users. To ascertain the demographic differences between users and non-users of MB. In terms of gender, a greater proportion of males than females are non-users of MB. Significant differences in age groups also exist between users and non-users. Respondents in the younger age group (73.3 percent are between the ages of 18 and 25) are more likely to be users than those in the older age group (85.7 percent are of above 55 yrs). Additionally, education, occupation, monthly income, and bank choice are different between users and non-users.

Table 1. Demographic Comparison between Users and Non-Users of Mobile Banking

Demographic Variable	Total	User		Non -User	
		N	Percent	N	Percent
1. Age Group					
18 Years to 25 Years	15	11	73.3	4	26.7
26 Years to 35 Years	21	13	61.9	8	38.1
36 Years to 45 Years	31	18	58.1	13	41.9
45 Years to 55 Years	26	14	53.8	12	46.2
Above 55 Years	7	1	14.3	6	85.7
2. Gender					
Male	59	33	55.9	26	44.1
Female	41	24	58.5	17	41.5
3.Educational Qualification					
Upto Higher Secondary	4	1	25.0	3	75.0
Graduate	31	21	67.7	10	32.3
Post Graduate	41	20	48.8	21	51.2
Professional	24	15	62.5	9	37.5
4. Occupation					
Government Employee	5	3	60.0	2	40.0
Private Employee	52	31	59.6	21	41.4
Business & Self Employed	10	6	60.0	4	40.0
Student	8	2	25.0	6	75.0
Housewife	10	6	60.0	4	40.0
Retired Person	6	2	33.3	4	66.7
Professional	9	7	77.8	2	22.2

5. Annual Income					
Less than One Lakh	20	12	60.0	8	40.0
1 Lakh to 3 Lakhs	24	13	54.2	11	45.8
3 Lakhs to 5 Lakhs	13	8	61.5	5	38.5
5 Lakhs to 10 Lakhs	15	8	53.3	7	46.7
10 Lakhs and above	28	16	57.1	12	42.9
6. Type of Bank					
Public Sector Bank	50	21	42.0	29	58.0
Private Sector Bank	50	36	72.0	14	28.0
Total	**100**	**57**	**57.0**	**43**	**43.0**

Source: Computed from Primary Data

5.2. Users and non-users' comparisons

The dependability of constructs groups has been determined. Table 2 summarises the number of items, the mean, the standard deviation, and the reliability values. As illustrated in Table 2, the Cronbach's coefficients for all seven dimensions are significantly greater than the minimum value of 0.7 (Nunnally, 1975). As a result, we may confidently infer that the constructions are dependable and move on to the next stage of analysis.

Table 2. Mean, Standard Deviation and Cronbach's Alpha Reliability.

Dimension	No. of Items	M	SD	Alpha
Behavioural intention (BI)	3	12.42	2.332	0.850
Performance expectancy (PE)	3	15.83	2.005	0.841
Effort expectancy (EE)	4	19.57	2.563	0.743
Social influence (SI)	3	13.08	1.921	0.762
Facilitating conditions (FC)	3	15.23	2.155	0.814
Trust (TR)	3	12.04	2.382	0.920
Perceived risk (PR)	4	14.11	3.293	0.910

Source: Computed from Primary Data

Note: Means scores based on a five-point scale, where 5 = strongly agree, 4= agree, 3 = neutral, 24 = disagree and 1 = strongly disagree. M denotes Mean and SD –Standard Deviation.

5.3. Comparison Between Users and Non-Users of Mobile Banking

In Table 3, users and non-users of MB describe their experiences with the various dimensions. On a five-point scale, statements are rated from 1 (strongly disagree) to 5 (strongly agree). ANOVA results show no significant changes in the BI dimension, which is a measure of behavioural intention. All other dimensions are considerably affected. The generally consistent response by users and non-users implies that while the behavioural intention is recognised by all users, it does not make a significant difference on intention to use decision.

Table 3. Comparison Between Users and Non-Users of Mobile Banking

Dimensions	Users (N=57)		Non-User (N=43)		F Stat	
	Mean	SD	Mean	SD	F	Sig
Behavioural intention (BI)	12.51	1.83	11.65	2.77	3.464	0.066
Performance expectancy (PE)	13.46	1.00	8.26	1.36	483.581	0.000*
Effort expectancy (EE)	17.28	1.65	15.60	1.38	29.111	0.000*
Social influence (SI)	13.56	1.07	10.14	1.80	141.192	0.000*
Facilitating conditions (FC)	13.07	1.03	8.88	1.64	244.560	0.000*
Trust (TR)	13.74	0.99	7.16	2.36	359.309	0.000*
Perceived risk (PR)	7.68	2.04	16.12	1.94	437.075	0.000*

Source: Computed from Primary Data

Note: * Significance level at < 0.05
Mean Score is based on a sum of five-point scale

The complexity dimension has been quantified, and six (6) of the seven (7) dimensions have been identified. ANOVA result demonstrates a significant difference between users and non-users. With regards to Performance expectancy (PE), the H2, is accepted (F = 483.581, P<0.05) and therefore it is inferred that there no exists significant difference between users and non-users about their performance expectancy. It implies that users aware and/or understand and agree (M=13.46; SD=1.00) that MB provides them better service than non-users (M=8.26; SD=1.36) When compared to those not-using MB services, users of MB services indicates that MB offers lot of services. Similarly, mean scores of non-users (M-15.60; SD-1.38) of MB are lower for the Effort Expectancy (EE) dimension (F-29.111; p < 0.05) This finding is supported by past studies which suggest that previous experience with computer and new technology will have an effect on MB (Chauhan, 2015; Liébana-Cabanillas et al., 2019; Sundararaj & Meera, 2022; Viswanath et al., 2003). Banks must encourage customers to try this new technology to convert the non-users to adopt MB. It is also interesting to see that users of MB tend to exhibit an easy diffusion of innovation

With regards to Social Influence (SI) dimension, the hypothesis is accepted (F-141.192; p<0.05) and there exist significant difference between users (M-13.56; SD-1.03) and non-users (M10.14; SD-1.80) of Mobile banking services. Similarly, in respect of Facilitating conditions, there exist significant difference (F - 244.560; P -0.05) between users (M-13.07; SD-1.03) and non-users (M- 8.88; SD-1.64).

As for the elements of perceived risk, responses from the users (M-7.68; SD-2.04) and non-users (M =16.12; SD =1.80) of MB indicate that this has a significant effect on adoption (F-437.075; P <0.05). The risk perception of information about transactions getting tampered by others is high among respondents in the non-user group. Banks must initiate steps to ally this fear. Non-users also see the risk of PIN codes getting lost and ending up in wrong hands. These findings are supported by results of another study (Laforet and Li 2005). Trust as an element, the perception of users (M-13.74; SD-0.99) and non-users (M-7.16; SD-2.36) of MB states that there exists significant difference among users and non-users on the adoption of MB (F-359.309; P<0.05).

6. Discussion – Opportunities and Challenges

This paper intends to identify the opportunities and challenges on the adoption of Mobile banking services. The study has found that young, female educated private sector respondents are users of Mobile banking services than aged male and private sectors employees are non-users. Furthermore, irrespectively users and non-users does have similar intention to adopt MB services. This clearly indicates that bankers have opportunity to spread its wing across all demographic population. In respect of performance expectancy, the non-users have low level of awareness about benefits of adopting MB services. Therefore, it is a challenge as well as opportunity to create awareness about the MB to the non-users. Ease of Use (Effort expectancy) is marginally but significantly lower among non-users. In order to create confidence and facilitate use, more demonstrations via live or videos and FAQ may overcome this obstacle among non-users. By using peer-group pressure and offering MB services even lower end handsets will create greater opportunity for the adoption of Mobile Banking services. The most important challenge in the adoption of MB services are trust and perceived risk and are interrelated. That can be overcome by creating trust among user through peer-groups and users. Perceived risk, as a challenge, can be overridden by creating trust like creating awareness about protective mechanism and safeguards on using Mobile banking services.

7. Conclusions, recommendations and limitations

The purpose of this study has been to identify the target customers, the demographic features of MB users and non-users, and their adoption behaviour toward MB to find opportunities and challenges in the adoption of MB services. In

terms of demographic variables, the current study's conclusions received mixed support from earlier research. MB is typically more popular among teens. Comparing users and non-users of MB reveals that six of the seven dimensions have an effect on MB adoption. Performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC), trust (TR), and perceived risk are identified as the most influential elements influencing consumers' decision to useor not to use MB. Additionally, the findings indicated that respondents place a premium on relative advantage and simplicity of use when making an adoption decision. As a result, raising awareness of the benefits and ease of usage is both a significant task and an opportunity. Users who have a favourable opinion of the perceived benefits of MB have been MB users. Customers become more receptive to using them when they discover a lack of complexity. As a result, banks should place a premium on conveying the relative benefits of using MB services and on providing user-friendly MB services. Another factor affecting MB uptake is favourable conditions and compatibility. This means that users will utilise MB if it fits their lifestyle and interests. This suggests that banks should take into account the compatibility of MB with an individual's income level, lifestyle, and preferences. MB is still in its infancy, but it has immense promise. This study's conclusions have significant ramifications for banks, financial institutions, and wireless telecommunications service providers. This study provides significant data for banks in terms of identifying opportunities and gaining a better knowledge of the main issues and obstacles associated with MB adoption.

While conducting this research, a few limitations are recognised and acknowledged. Due to the small sample size, caution should be exercised when generalising the conclusions of this study. Longitudinal studies are advised to study the influences across time and create comparisons, so gaining a better understanding of MB uptake.

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