

**A STUDY OF MOBILE BANKING ADOPTION BY ELDERLY PEOPLE IN INDIA**

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**ABSTRACT**

With the introduction of new technologies, the world has changed dramatically. It has already shifted the traditional manner of doing business to online business and now to mobile phones. Mobile banking (MB), often known as mobile branch banking, is a breakthrough in the banking industry. Technological advancements are intended to help society, but the question is whether or not all segments of society are benefiting from them. According to recent studies, the rate of adoption of mobile banking is relatively low among the elderly. The purpose of this study is to discover the elements that influence older people's desire to adopt Mobile banking. This study does a thorough analysis of mobile banking services. Its primary goal is to present an up-to-date analysis of this particular expanding category of services. It lists and evaluates the key factors that influence and provide obstacles to consumers' adoption of mobile banking. Also, it lists the most frequent effects of this adoption. This study theoretically contributes to the existing body of knowledge regarding the adoption of mobile commerce in general and mobile banking in particular, aiding present and future researchers, banks, advertisers, and other practitioners by providing useful information for targeted decisions. The study finds out the drivers and barriers of mobile banking by thorough study of literature.

**Keywords :** *Mobile Banking (MB), Internet Banking (IB), MB Adoption, Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT)*

**1. INTRODUCTION**

Recent advancements in Internet connectivity have rekindled interest in internet banking among certain categories of workers. Furthermore, with the rapid growth of mobile and smartphones, internet banking has become more accessible to a larger number of people, since they can conduct their banking activities via mobile banking from anywhere and at any time (Lee & Chung, 2009). Mobile banking (also known as M-banking) is an extension of Internet banking that offers time independence, convenience, quick customer response, and cost savings. These advantages provide banks with an opportunity to expand their customer base by offering mobile services. Many study projects have been carried out with the aim of comprehending the variables influencing users' adoption of online banking technology in developed countries (Daniel, 1999; Sathye, 1999; Mols, 2000; Thornton and White, 2001; Kuisma et al., 2007). The research on this topic in developing countries is far from adequate and requires further attention (Anandarajan et al., 2000; Al-Somali et al., 2009), despite the fact that some studies have also been reported on developing countries in Asia, Africa, Europe, and South America.

According to Yu (2013), despite the numerous perceived benefits for customers, the actual usage of m-banking has not increased at a rate as initially anticipated. Existing mobile banking studies have not delved into the factors that influence the adoption of mobile Banking (MB) among older persons in developing countries who have been reported to be reluctant to use ICT. According to the World Health Organization, the number of people aged 60 and more will rise from 1 billion in 2020 to 1.4 billion by 2030. As the older population becomes a larger part of society, it is more vital to comprehend the reasons for their reluctance to adopt new technologies that could make their lives easier. As the aging idea evolves, there is a growing understanding that technology may help senior persons improve their living conditions, resulting in a healthier life and the ability to live independently for extended periods of time in their various settlements or communities. Mobile phones, computers, home electronic gadgets, and a variety of other assistive technology provide older individuals with a wide range of options for living independently. Scholars have recognized technology as one of the solutions to the challenges linked with aging (Kim, 2008; Melander-Wikman, 2008; Peek et al., 2016; Selwyn, 2004). A literature study of mobile banking and the theories used to explore the field, as well as theories used to examine the adoption, use, and dissemination of novel ICT among older individuals and mobile phones, specifically smartphones, was conducted for this aim.

**2. FACILITIES OFFERED BY MOBILE BANKING**

- a) **Easy Navigation:** Mobile banking apps are designed with easy-to-use interfaces, which can be helpful for older people who may not be familiar with technology (Zhou, 2012).
- b) **Accessibility:** Older people can access their bank accounts and perform financial transactions from the comfort of their homes, without having to visit a physical bank branch (Foroughi et al., 2019).
- c) **Large Print and Voice Assistance:** Mobile banking apps often offer large print options and voice assistance, making it easier for older people with visual or hearing impairments to use the app.
- d) **Bill Payments:** Older people can pay their bills, such as utility bills and credit card bills, through their mobile device, saving them the time and effort of physically visiting a bill payment center (Zhou, 2012).
- e) **Transferring Funds:** Older people can easily transfer funds to family members or friends, or between their own accounts, using their mobile device.
- f) **Fraud Detection and Protection:** Mobile banking services often have built-in security features, such as fraud detection and protection, to keep customers' financial information and transactions secure.
- g) **24/7 Customer Support:** Mobile banking service providers offer customer support 24/7, which can be helpful for older people who may need assistance with using the app or resolving issues.
- h) **Mobile Alerts:** Older people can set up alerts to receive notifications for important transactions, such as deposits, withdrawals, and bill payments.

**3. THEORETICAL BACKGROUND**

Manorajan Dash (2014) investigated the adoption of mobile banking in India and the dissemination of innovation. The adoption of mobile banking by customers was found to be influenced by innovative features, such as compatibility, relative advantage, observability, institution theory, and trial-ability. Also, it was discovered that compatibility, trial-ability, and mimetic force were reliable indicators of users' attitudes about adopting mobile banking.

Alsoufil and Ali (2014) looked into the variables affecting customers' perception of the use of mobile banking. The extended TAM was used in the study to assess and measure experimentally its influence on the uptake of mobile banking in Bahrain. The TAM model study found that certain elements, such as perceived utility and simplicity of use, had a significant impact on customers' intentions to use mobile banking. Perceived cost and risk did not appear to have any impact on the customer's intention to use mobile banking services.

Bhatnagar (2015) investigated how well-informed rural clients were about and used banking services. Most banking customers are aware of mobile technology banking services, according to the study's findings. Customers with high levels of awareness often use mobile technology-based services, while those with low levels of knowledge do so infrequently. Due to a lack of financial literacy training and programmes, it was also shown that rural clients had a poor degree of awareness of the numerous services available through mobile banking. A suggestion was made to increase the unbanked population's knowledge of the various banking products and services through literacy initiatives.

Kabir et al. (2015) established a conceptual framework based on the TAM elements' perceived utility and perceived ease of use to identify factors impacting hospital staff's adoption of technologies. A customer's decision to use an electronic system was found to be impacted by its perceived usefulness and convenience of use.

Alalwan et al. (2016) investigated the uptake of mobile banking by consumers, with the goal of improving customer happiness and loyalty while offering clients better service through a more cost-effective channel. The outcome suggests that using mobile banking services to complete digital transactions is more beneficial and effective. It was discovered that clients' use of mobile banking sped up the adoption of cutting-edge technology.

Bhatt and Bhatt (2016) provided a description of the mobile banking users' behaviour patterns and a list of the variables affecting those users' behaviour. Customers had refrained from using m-banking and e-banking due to security concerns. Consumers who use mobile banking have discovered the benefits of speed, comfort, safety, operational simplicity, and ease of navigation.

Oliveira et al. (2016) have studied the factors that influence Portuguese consumers' decision to embrace and advocate mobile payment technology. The authors used the UTAUT model to discover a number of variables that affect customers' behavioural intentions to advocate mobile payment technologies, including performance expectation, effort expectancy, social influence, enabling conditions, hedonic motivation, and pricing value. The authors talked about how adopting mobile payments can help with payment tasks and to what extent. The authors further stated that factors affecting the intention to embrace mobile payment technologies had not yet been thoroughly evaluated.

Brid et al. (2017) investigated how various societal segments use mobile banking applications. The use of mobile banking applications for transactions was found to be preferred by 50% of banking customers. Additionally, only male clients in the private sector and students opted for digital and cashless payments as opposed to their female counterparts. The survey comes to the conclusion that customers prefer utilising the payment app (Paytm) for smaller transactions and do not utilise payment apps if the value surpasses Rs. 500.

Payne et al. (2018) looked at the variables affecting digital natives' attitudes and perceptions towards mobile banking and activities that use AI. The findings show that digital natives have different perspectives on the relative advantages of the two dependent variables. In line with earlier research, the relative advantage construct has an impact on the use of mobile banking. Yet, the proportionate advantage for AI-enabled mobile banking was found to be small, showing a complexity that goes beyond practical banking.

Li et al. (2019) used the external technology acceptance model to perform a study on Alipay mobile payments. The writers made an effort to comprehend the psychological factors that affect how likely users are to use mobile payments. The findings showed that customer perception played a major role in determining one's intention to utilise Alipay.

The variables favouring digital payment methods and driving the expansion of e-wallets were researched by Durshan and Agarwal in 2019. The traits that the respondents believed to be determinants were found to have a substantial relationship. The authors came to the conclusion that further education about digital wallets was required.

Pal A et al.(2020)The study finds that perceived convenience has a stronger impact on usage intention, outweighing perceived risk. Additionally, habit plays a significant role in driving actual usage behavior. Understanding these factors is crucial for improving mobile payment adoption while addressing user concerns.

Sharma et al. (2022) found that social media has a strong influence on the adoption of mobile banking services among young consumers. The study reveals that the decision-making process for mobile banking follows the stages of the AIDA model, with social media playing a significant role in the Action and Interest stages. The research highlights the increasing importance of social media with higher cognitive levels and emphasizes the need for tailored strategies to engage young consumers in adopting mobile banking services.

Alalwan et al. (2023) examined mobile banking adoption in emerging economies by extending the UTAUT2 model with trust and perceived security constructs. Using Structural Equation Modeling (SEM), the study found that performance expectancy, trust, and perceived security significantly influenced behavioral intention, while digital literacy strengthened actual usage behavior. The research emphasized the growing importance of cybersecurity awareness and digital trust in sustaining mobile banking adoption in developing countries.

Raza et al. (2024) explored continuance intention toward mobile banking services by integrating expectation-confirmation theory with UTAUT2. The study demonstrated that customer satisfaction, trust, and habit significantly predicted continued usage intention. Perceived service quality and system reliability were identified as critical drivers of post-adoption behavior, suggesting that banks should focus on user experience to retain customers in competitive digital markets.

Verma et al. (2025) investigated sustainable digital banking behavior by integrating environmental consciousness into mobile banking adoption models. The findings showed that perceived environmental benefits and convenience positively influenced behavioral intention, suggesting that promoting mobile banking as an eco-friendly alternative to traditional banking can enhance adoption rates among environmentally aware consumers.

#### **4. ELDER PEOPLE AND TECHNOLOGY**

The user can be impacted by technology implementation in a variety of ways, and a technology's success is mainly reliant on how well it is received by each particular user. A lower level of user acceptance has led to the failure of several implementations. It has been seen that higher the change technology brings more resistance it faces.

Different organizations, countries, and locations around the world categorize people differently. Despite the fact that there are certain widely accepted definitions of old age, there is no universally accepted definition of old age.

There is widespread agreement about the age at which a person is considered elderly. Although the typical usage of a calendar age to indicate the beginning of old age presupposes equivalence with biological age, it is well acknowledged that the two are not always identical. People over the age of 60 are referred to as 'the old'. However, some countries define older adults as those aged 65 and above. The US government, for example, considers anyone above the age of 65 to be elderly, at which point they are eligible for governmental benefits like Social Security and Medicare. Older persons continue to remain behind the overall population in terms of technology adoption (Anderson & Perrin, 2017). This is disappointing given the rising corpus of research indicating that older folks' quality of life may be considerably improved by using technology. According to Gatto and Tak (2008), older persons found computers to be helpful in terms of fostering a feeling of community, satisfaction, utility, and fruitful learning opportunities. They did note that time constraints, mistrust, physical and mental limits, and irritation were some of the obstacles to using computers. The existing internet interfaces are not user-friendly, according to older individuals. The delayed adoption of mobile banking has been attributed in large part to risk and privacy concerns (Dupas et al., 2014). According to Kuoppamäki, Taipale et al., 2017 older people like using mobile technology for entertainment and online shopping, but still scant research is done about the elder people use of wide range of mobile banking services, like mobile banking (Chawla & Joshi, 2017).

#### **5. MOBILE BANKING**

While branch-based retail banking remains popular, banks have additional options for offering financial management services to customers, one of which is m-banking (Rammile & Nel, 2012). Mobile banking is a revolutionary internet banking invention that eliminates the need for consumers to carry and utilise bulky computer systems and laptops to access banking services. Although there is no universally accepted

definition of mobile banking but according to Shaikh and Karjaluo (2015) using a mobile device, such as a mobile phone, smartphone, or tablet, to perform financial and non-financial transactions is known as mobile banking. It is a service or product provided by a bank, microfinance institution, or MNO (non-bank-led model). Mobile banking allows consumers to access a variety of banking services via their mobile phones, even if they do not have access to the internet. Mobile banking is one of the most significant technical advancements in financial institutions and daily life activities, with numerous advantages (Lin, 2011). It creates customer value because it is fundamentally time and place agnostic (Lin, 2013) – “anywhere and anytime” – devoid of temporal and spatial restrictions (Laukkanen, 2007).

## **6. ADOPTION THEORIES**

Many theories, including the Innovation Diffusion Theory (IDT) (Rogers, 1983), the Technology Acceptance Model (TAM) given by Davis, 1989, the Theory of Planned Behavior (TPB) (Ajzen, 1991) and Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003), have been used to study the adoption of technology. IDT theory investigated the uptake of innovation and pinpointed elements influencing consumers' attitudes towards the adoption of technology. TAM and UTAUT explored how customers adopted technology, but they did not differentiate between pre-adoption, adoption, and continuous usage behaviour (Bhattacharjee, 2001).

On the other hand, there are further theories that are connected and deserving of discussion. Some ideas include Theory of Planned Behaviour (TPB) (Abuelmaged and Gebba, 2013), which argues that behavioural intention—which in turn depends on an individual's attitude and beliefs about how much control they have over a given activity—precedes adoption behaviour.

According to TPB, people can control their behaviour in a range of ways, from those that require little effort to those that demand a lot of time, energy, and other resources. These controls are likely to be crucial in explaining how behavioural intentions and actual behaviour are related, but because evaluating actual controls can be challenging, Perceived Behavioural Control is often used as a substitute (Hanafizadeh et al., 2014).

Social Cognitive Theory (SCT) introduces human behaviour as the outcome of the interaction of personal variables, behaviour, and environment. SCT provides a framework for understanding, predicting, and modifying behaviour. According to this theory, a person's thoughts and deeds have an impact on how they engage with their conduct. In the interaction between a person and their environment, social influences and environmental frameworks have an impact on human thoughts and cognitive abilities. In order to comprehend and anticipate both individual and group conduct as well as to determine how to alter or modify behavior, SCT is helpful (Hanafizadeh et al., 2014).

## **7. DRIVERS AND BARRIERS OF MB ADOPTION**

There are two types of factors that affect adoption behaviour of any customer. The ones which positively impact the adoption behaviour are considered as enablers or drivers of adoption behaviour similarly, which negatively affect adoption behaviour are considered as barriers to adoption. In literature, there are some common factors which have an impact on adoption behaviour in any way. So, this study considers the commonly studied factors in literature regarding mobile banking adoption.

### **7.1 Perceived Risk**

According to Laukkanen et al. (2009), customers' perceptions of risk when transacting online correspond to several categories of temporal, physical, social, psychological, financial, and performance concerns. Yang (2009) came to the same conclusion in his study on the adoption of MB, while Purwanegara et al. (2014) and Chen (2013) discovered the same thing when they attempted to investigate the impact of perceived risk on the adoption of MB. Through perceived utility and simplicity of use, perceived risk has also been demonstrated to be a significant element influencing consumers' perceptions (Akturan and Tezcan, 2012). Hanafizadeh et al. (2014) claim that the remote connectivity of MB puts it at more danger than other stationary devices.

### **7.2 Compatibility**

The degree to which individuals believe an innovation is consistent with their thinking, act, and life they are living is known as compatibility (Hernandez and Mazzon, 2007). Compatibility has a noticeable impact on the adoption of MB, as determined by Shaikh and Karjaluo (2015) and Wessels and Drennan (2010) who conducted a thorough study to identify the important factors stimulating and obstructing the adoption of MB. This finding was supported by Koenig-Lewis et al. (2010) in their investigation into the use of MB services by young users in England. Hence, high compatibility increases the likelihood that innovations will be adopted as it enables innovations to be perceived in a more familiar way (Ilie et al., 2005).

### **7.3 Awareness**

The level of a consumer's knowledge of an electronic banking channel is defined by Lee et al. (2007). Low awareness is discovered to be a crucial obstacle to their adoption of MB because it is a novel experience for the majority of bank clients (Al-Somalli et al., 2009). According to Chen (2013), awareness has a significant role in MB adoption through influencing attitude. In their investigation of the benefits of clients' awareness of internet banking services in lowering the adverse effect of their perceived risk, Hanafizadeh and Khedmatgozar (2012) discovered that awareness of internet banking reduces all aspects of perceived risk.

### **7.4 Perceived Ease of Use**

The degree to which a person perceives that using a certain system would need no effort is known as perceived ease of use (Davis, 1989), and it is a key factor in the impending adoption of new technology-based applications (Venkatesh, 2000). Some earlier studies have shown how attitudes regarding using MB are influenced by perceived ease of usage (e.g. Wang and Liao, 2013). Nonetheless, it is assumed in this study that convenience of use influences MB usage and promotes customers to utilise it for financial transactions. Furthermore, it has been demonstrated that perceived usefulness is influenced by perceived simplicity of use, affects attitude, according to Schierz et al. (2010). As a result, it is anticipated that perceived usefulness will also have an indirect impact on consumers' sentiments via perceived ease of use.

### **7.5 Perceived Usefulness**

The degree to which a person thinks that utilising a specific system would improve his or her ability to accomplish their work is known as perceived usefulness (Davis, 1989). A major factor in attitude is perceived utility, which motivates users of 21st-century banking to adopt more cutting-edge and user-friendly technologies that provide them more freedom in carrying out transactions, paying bills, and carrying out other banking matters (Pikkarainen et al., 2004). It has been discovered that perceived usefulness significantly improves attitudes and usage intentions about using MB services (Shaikh and Karjaluo, 2015; Purwanegara et al., 2014). Indeed, a person's willingness to adopt a certain system for transactions depends on how they view its application (Hanafizadeh et al., 2014).

### **7.6 Trust**

Trust is a crucial concept in the commitment-trust theory. Morgan and Hunt (1994) demonstrated that trust is essential to relationship marketing success. When one side has faith in an exchange partner's dependability and honesty, they believe trust to exist. Trust is defined as a person's confidence in a partner's talents and intentions, as well as their belief that the spouse will act in the way the person hopes. Consumer perceptions of banks and other financial institutions, and views towards new forms of service delivery over the internet, can be impacted by a lack of trust (Zhao et al., 2010). According to research, there is a strong correlation between the uptake of mobile banking and trust in the e-channel (Kim and Prabhakar, 2000).

## 8. METHODOLOGY

In this literature review paper, the methodology adopted to examine the state of the art in mobile banking adoption among older adults over the past decade is rooted in a comprehensive and systematic approach. To construct a nuanced understanding of the subject matter, a thorough review of research articles and papers spanning the last ten years was conducted. Keywords such as "mobile banking adoption," "MB adoption," "mobile payment services," and "older people and technology" were meticulously employed to pinpoint relevant studies. Additionally, efforts were made to identify and employ more precise or suitable keywords to ensure a comprehensive coverage of the literature. This study adopts a conceptual framework to analyze and synthesize the evolving discourse on mobile banking adoption within the context of older adults, facilitating a broader and deeper comprehension of the trends and emerging patterns in this area.

## 9. CONCLUSION

The goal of this study was to understand the adoption behaviour of the elderly and also pinpoint the elements that influence Indian consumers' acceptance of mobile banking, which can be crucial for e-banking professionals. This work is congruent with related research done by Al-Sukkar and Hassan (2005) and King and He (2006). These above mentioned six factors are the most commonly studied factors and these factors have a great impact on customers' intention to adopt any technology. Perceived risk has been considered as the barrier to the adoption of mobile banking among elderly people whereas perceived ease of use and perceived usefulness are the factors that fascinate any individual to adopt mobile banking.

Banks can emphasize the benefits of mobile banking to the elderly, such as the elimination of the need to visit the bank's branches or the avoidance of long lines. Similarly, this reality necessitates the adaptation of Webpages in terms of design in order for them to be a friendly and easy-to-use environment. Customers should be able to quickly use a website with a straightforward design that improves visibility, clarity and navigability. Banks can focus on the demands and preferences of the elderly if they segment the market. In this vein, it seems acceptable to speculate that MB's success may be due to the personalization of services in order to attract the elderly. MB provides benefits to the aged, including 24-hour access, freedom, variety and the ability to overcome physical hurdles to obtaining services due to age. Elderly people are a huge sector of the population with distinct features from the rest of the population (more free time, more economic and financial freedom). Banks must better grasp the new sort of relationship that the internet creates, as well as how the elderly accept and use this system, in order to compete in this market.

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