



An Investigation of the Factors Influencing Customer Adoption of Mobile Banking Services in India

Dr. Rohit Singh Dangi*

Associate Professor Management Department

Maharishi Centre For Educational Excellence Bhopal, M.P. India

Abstract- Information Technology has basically been used under two different avenues in banking. One aspect is focused on communication and connectivity, while the other pertains to business processes. Presently, banks have embraced wireless and mobile technology in their boardrooms to provide their consumers with the liberty to settle bills and schedule payments. to receive updates on the various marketing efforts. With mobile phones emerging as the most popular device, mobile banking, or M-Banking, has arisen as a new era financial service in India, which boasts a thriving telecom industry. Even with this chance, mobile banking has been unable to get the traction that its proponents had anticipated. This research is based on the data collected through “Questionnaire” with Mobile banking user. A sample of 100 respondents in New Delhi Central was selected and a self-administered questionnaire was used to collect primary data Basic statistical analysis, Reliability Analysis and Factor Analysis was conducted. The study indicates that the adoption of mobile banking services in New Delhi is primarily influenced by factors such as telecom and bank service-related factors, external factors, perception factors, and satisfaction factors.

Keywords- Mobile Banking, M-Banking, Non-Mobile Banking Service, Trust and Transparency.

INTRODUCTION

An important part of the Indian economy is played by banking, which is a subset of financial services. In order to raise the community's standard of living, banking as a commercial organization is in charge of collecting money from the general public in the form of savings and rent repayment via credit and other means. the accelerated advancement of technology and information has a significant impact on banks' ability to innovate electronic banking services and products. Financial technology refers to a variety of technology-based banking services (Gopinath Parimala 2023). The success rate of innovation and service development will be determined by management's capacity to implement new technologies. because Indian culture is a low-risk-taking society, banks are critical financial

institutions that shield the general public's cash-related risk. Emerging and rapidly expanding breakthroughs in information technology and globalization have altered the entire service delivery process. Innovative information technology is the backbone of any country's economic development. Globalization, competitive pressure, and technological innovation all impact the banking industry. Banking applications have moved on from the classic brick-and-mortar prototype into modern day mobile banking, allowing clients to virtually access their banks via mobile phones and access services from anywhere and at any time with the push of a button. Mobile banking has enormous potential for boosting client base by delivering ease, convenience, and useful account information to users (Shukla 2020).

Mobile banking and other digital channels are believed to provide broader access and more cost-effective services to the unbanked people in our country. While traditional banking may not be costly, it does not provide financial inclusion, which is detrimental to the Digital India initiative of the Indian government. Financial inclusion ensures that a comprehensive range of cost-effective monetary services is available to the entire community, promoting diversity and maximizing value. Currently, as low as 47% of population in India has unique banking offers. Financial inclusion cannot be achieved until the entire population receives a wide variety of banking offerings. Furthermore, simply providing broad forms of banking services, with a large style of technical services, would not be sufficient to realize the purpose of the Government of India to create a "Digital India". The objective of the "Digital India" program is to digitally hand over every citizen of India and fulfil the post of an authority in Information Technology (IT) for the advancement of health, education system and banking offerings (as envisaged with the aid of the Government of India (GoI) in their Vision and Vision Area, (digital India vision record, 2019). The goal behind branding the country as "Digital India" is to gain a leadership role for India in the field of IT. Once India is in the competitive position, it is proposed that its benefits should be used to offer higher health, education and banking.

Regarding banking services, it is crucial to realize that all Indian citizens have access to a vast array of these at reasonable prices, through the use of high-quality services that are technically advanced and offer significant value. Mobile banking is one example of such a service. Ensuring that all Indian residents embrace these services is very difficult. Adoption could be considered the first stage in determining a customer's willingness to accept technologically advanced services like mobile banking. If these emotions are existent, conducting such a step during primary research may offer unique insight into Indians' disinterest in adopting mobile banking. Then, policymakers ought to endeavor to remove any barriers preventing such profit-ploughing. This would guarantee the highest possible degree of adoption of technologically advanced networks and an awareness of the Indian government's role as a presenter in achieving a leadership position in information

technology under the banner of "Digital India"(Priya R. 2018).

Understanding Indian customers' attitudes towards accepting mobile banking and technologically advanced services is crucial, especially for those who have not yet embraced them, in light of the aforementioned mission. This demonstrates how mobile banking can function as a network to facilitate financial inclusion by leveraging customer intentions to adopt mobile banking. Every Indian must have access to a wide range of financial services before there can be expressive financial inclusion. In the same way, the Indian government's efforts to establish "Digital India" will remain unfulfilled until each and every Indian acknowledges that they have access to a vast array of financial and non-financial services through digitization (THAKER 2019).

It has devised novel methods of conducting balance inquiries, online fund transfers, utility payments, and other services using a standard mobile handset. Rapid advances and improvements in the realms of information and communication technology have resulted in a number of enhancements in the design and supply of products and services in the banking sector. With the addition of many services provided by banks, such as making it very easy for clients to pay their electricity bills, perform mobile recharges, conduct immediate transfer of funds, and much more, the use of mobile banking has expanded significantly (Shankaran 2022).

The successful debut of different mobile banking applications such as ICICI iMobile, HDFC Mobile Banking, SBI's YONO App, and many more mobile banking applications has proven to be a game changer around the world. The Government of India has also extended its support to mobile wallets through cooperation prototypes with several banks in order to enhance consumer acceptability of MBanking. The brick and mortar systems have given way to the click and portal systems. Using information technology, all banking services such as account opening, transaction processing, record maintenance, queue management, and information provision have been transformed. Technology advancement transforms the bank's batch processing system into a real-time processing system. ATMs, Internet banking, mobile banking, and plastic money are some of the new developing concepts that are transforming bulk services into

customized services. The growth of technology has aided financial organizations in the replacement of physical cash with a more cost-effective and less unsafe flexible payment method (Kumar 2019).

The explosive development of mobile communication and wireless technology has greatly advanced the provision of banking services through mobile phones. An remarkable system with immense potential might effectively attract a substantial customer base to choose mobile banking services. In the current technological era, characterized by several available channels, the mobile banking system stands out as a unique and appealing option to acquire a larger customer base. The purpose of this paper is to explore factors influencing customer Adoption of mobile banking (m-banking) services in India (Mohammad 2015). Moreover, the objective is to determine the key elements that significantly impact the intention to embrace m-banking.

Concept of Mobile Banking

Mobile Banking, a new technological advancement, is beneficial to both the bank and its consumers. In Mobile Banking Service, customers communicate with banks via mobile phones, and banks provide services such as SMS, financial transfers, account details, cheque book issuance, etc. Currently, practically all Indian banks offer "Mobile Banking Service." Mobile banking is a relatively new trend in India, having begun in 2000 with the launch of mobile banking by HDFC Bank. Significant increase has been observed in advanced nations, where the number of mobile banking customers now exceeds 300 million.

"Mobile Banking can be defined as the ability to conduct the bank transactions via a mobile device, or more broadly – to conduct financial transactions via a mobile terminal." [Drexelius & Herzig, 2001]

Table 1: Service provided by Various Banks.

Name of Bank	Mobile Banking Services provided
State Bank of India (SBI)	State Bank FreedomM; SMS Banking; USSD (Unstructured Supplementary Service Data)
Union Bank Of India (UBI)	SMS Banking; UMobile
Punjab National Bank (PNB)	SMS Banking
Allahabad Bank	SMS Banking
ICICI Bank	iMobile; SMS Banking; IMPS (Immediate Payment Service); NUUP (National Unified USSD Platform); Call To Pay; m.icicibank.com
HDFC (Housing Development Finance Corporation)	App based mobile banking for phones and tablets; Browser based mobile banking; SMS Banking; Toll Free Mobile Banking
Axis Bank	Axis Mobile; Axis Dial; SMS Banking; Phone Banking; Internet Banking on mobile.

LITERATURE REVIEW

Gopinath Parimala (2023), The subject of study Mobile banking has revolutionized banking services by shifting from physical bank branches to offering customers virtual access to their banks via their mobile phones. This has broadened the consumer base by providing simplicity, convenience, and readily accessible account information. An investigation including 61 participants from Coimbatore city revealed that mobile banking services were highly satisfactory. The success of these services may be attributed to elements such as confidence, security, convenience, and transaction speed.

Embracing internet banking services is becoming progressively imperative in order to surmount geographical limitations and time limitations.

Banks should prioritize the implementation of awareness campaigns about the advantages of mobile banking, as it has the potential to streamline financial transactions in daily routines.

Balthazaar Diyani (2023), The study aimed to determine the characteristics that impact customer adoption of mobile banking in Sri Lanka, with a specific focus on convenience, reliability, accessibility, security, and awareness. The study obtained primary data from 120 participants through the use of questionnaires, as well as secondary data from bank websites and online sources. The results of the multiple regression analysis indicate that all independent factors have a favorable influence on customer adoption of mobile banking. The report suggests that banks should target these characteristics by implementing marketing initiatives to expand their market share in mobile banking and facilitate people's access to and utilization of mobile banking services and advantages.

Sankaran Raja et al. (2022), this study examines the determinants that impact the adoption of mobile banking among Indian consumers, employing the Extended Unified Theory of Acceptance and Use of Technology. A study demonstrated that factors such as effort anticipation, monetary value, emotional value, quality value, trust, and gender influenced behavioural intent. Banking institutions can utilise these influential characteristics to attract and keep consumers, hence improving the acceptance of M Banking and other mobile financial services.

Olekar O Ramesh (2021), the objective of this research project is to examine the mobile banking services and applications offered by different banks in India. The data for this study is gathered from several sources, encompassing relevant articles, websites, and other resources. The study reveals that mobile banking serves not only as a banking tool, but also as a valuable resource for investing, mutual funds, portfolio management, and other financial domains. Customers perceive mobile banking as a convenient tool for carrying out financial activities.

A. Sivadasa Prabhu (2020), Conducted an analysis on the features and trends of mobile banking applications in Italy, as documented in Science Direct 2020. This study aimed to examine the range of branch banking services offered by several Italian banks. Mobile apps with a mobile web channel are evaluated in terms of their

additional functionalities on mobile devices, enabling the creation of more sophisticated features and applications. The data for this study was obtained via case studies.

Pavithra R.H. (2020), Conducted a study on the latest advancements in mobile banking services, specifically emphasizing Mysore city. The study primarily examined the respondents' attitudes about the use of mobile banking in rural areas, as well as the difficulties they faced while utilizing mobile banking. By employing a straightforward sampling technique, we obtained primary data from a total of fifty respondents situated across the city of Mysore. The results indicated that a substantial proportion of participants utilize PayPal as their primary payment method, followed by Paytm. Additionally, a majority of respondents own smartphones, which they mostly use for bill payments, followed by domestic activities.

Shukla V. et al. (2020), Conducted a research investigation on the effects of mobile banking on consumer satisfaction, specifically focusing on the Nagpur region. The study examined user knowledge of mobile banking services and identified the elements that influence customer satisfaction with mobile banking among respondents in the Nagpur area. The study's findings indicate that trust and security, convenience, and transaction speed are the primary characteristics that significantly impact consumer happiness.

Kumar Lohith et al. (2019), conducted a study on mobile banking in India, which included a classification on Framework for mobile banking research. The classification was based on 61 mobile banking papers that were published between the years 2000 and 2010. These papers were published in the fields of information system, technical innovation, and analysis on the perceived utility of various banking services. The findings of the study revealed that customers have successfully accepted mobile banking, and they are concentrating on financial security systems that should be made available by banks.

Kumar S. Gokul (2019), Mobile banking is an essential component of offering comprehensive financial services to customers, but Indian banks have been sluggish in embracing technology for automating and integrating services. This study centers on the level of consumer satisfaction

about mobile banking services in the regions of Gobichettipalayam and Sathyamangalam. Mobile banking enables clients to conduct financial transactions at any time and from any location using a mobile portable device and SMS capabilities. Banks may leverage enable banking to enhance employee productivity and enhance customer service. Information was gathered from a total of 105 participants through the use of questionnaires and analytical instruments. To establish customer trust, it is imperative to resolve security concerns. The majority of female respondents possess knowledge regarding mobile banking services, whereas college students actively utilize mobile banking services. Financial institutions ought to enhance public knowledge regarding mobile banking, furnish services in native languages, and use customer-centric initiatives to mitigate intricacy.

Bhatt Amola et al. (2016), A study conducted in Gujarat reveals that young, literate males prefer ATMs over e-banking due to security concerns. However, m-banking offers advantages such as time-effectiveness, convenience, safety, operational simplicity, and ease of navigation. This suggests that service providers must understand, and address customer needs to optimize their mobile banking experience. Despite the popularity of mobile banking, security concerns and technical issues still pose challenges for customers. Therefore, service providers must prioritize customer needs to improve their mobile banking experience.

OBJECTIVES OF THE STUDY

Although many Indian private and public sector banks offer mobile banking, or MBanking, the effective use of these services is still growing at a slower rate than the growth of other banking services like online banking, ATM credit/debit card services, and so forth. Given the benefits of mobile banking, some consumers find it more comfortable to visit a bank in person rather than using a mobile device to access the same services. Stated differently, it is noted that using mobile banking to access banking and financial services is still relatively new. Thus, the study has three goals in mind:

1. To determine the demographics of Bank clients using M-Banking services.
2. To identify the determinants that lead customers to adopt mobile-banking services.
3. To identify the reasons for no adoption of mobile-banking services.

HYPOTHESIS FORMULATION

The goal of the study is to identify the variables that affect consumers' decision to use mobile banking services. Therefore, our goal is to ascertain whether factor analysis can be performed, that is, whether these factors are non-specific and uncorrelated or particular and correlated. Thus, the following is a statement of our hypothesis:

The Null Hypothesis (H0) can is:

H0: The data set used is non-specific and uncorrelated.

Against the Alternative Hypothesis (H1)

H1: The data set used is specific and correlated.

RESEARCH METHODOLOGY

For this research study, exploratory research design and a quantitative research approach has been used. Firstly, past work of various scholars was studied through which a well-structured questionnaire was prepared. The questionnaire covered three broad areas including the general characteristics of the respondents; the reasons for non-adoption of mobile banking services; and the factors inducing adoption of mobile banking services.

Several close and open-ended questions were incorporated in the questionnaire including a five-point Likert Scale. Responses were obtained from respondents residing in New Delhi, India and aged 20 and above. Such a sample was chosen mainly due to the convenience of gathering information and the centralized location of banks and its customers. A sample size of 100 respondents was taken using convenience sampling method of non-probability sampling. Primary data was collected with the help of a self-administered questionnaire and the contact method used was personal interview. Field survey was effectively carried out from 24/09/2023 to 02/12/2023.

DATA INTERPRETATION

From Table 1.1 we see that the majority of the respondents fall under the age group of 20-30 years and 31-50 years who were either service employees or students who were either working or not working. Further all 100 respondents the sample chosen have at least one Bank account. This may be because the sample comprises of the urban population of India.

Table 2: Basic Demographic Information of Respondents

Age		Total Responses	Percentage of Total Responses	Cumulative Percentage
	20-30 years	65	65	53
	31-50 years	45	45	93.5
Gender	Male	55	55	54
	Female	45	465	100
Occupation	Unemployed	30	30	16.5
	Service Employee	30	30	75.5
	Self employed	40	40	85.5
Do you have at least one Bank account?	Yes	100	100	100
	No	0	0	100
With which of the following banks do you hold one/more accounts?	SBI (State Bank of India)	72	22.5	22.5
	Canara Bank	56	17.5	50.63
	HDFC	51	15.94	66.57
	ICICI Bank	61	19.06	85.63
	Others	13	4.06	100

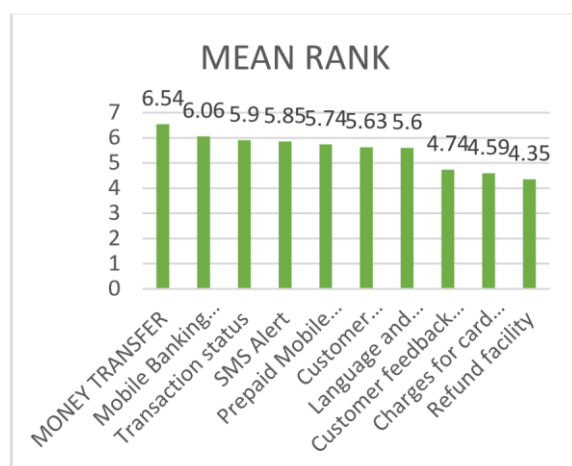


Figure 1: Purposes for using Mobile Banking

The next part of the study deals with identifying the factors that induce bank customers to adopt mobile banking services. five variables were identified that induce the adoption of mobile banking services, namely, security or privacy issues; range of services provided; time saving capability; Ease of transactions; overall satisfaction level with the Bank. A five-point Likert Scale, ranging from 1 to 5 was used to gather responses from 100 respondents who use mobile banking services; where 1 implied not important and 5 implied extremely important. However, before conducting Factor Analysis, a Reliability Test was conducted to assess the reliability of the data set. Table 1.2 shows the results obtained from Reliability Analysis.

Table 3: Values of Cronbach's Alpha if Item deleted for each of the items lies below the standardized alpha value of 0.803. This confirms that the data set taken is highly reliable and there is no need to delete any item from the data set.

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Security or privacy issues	23.94	18.318	0.2215	0.2845	0.3845
Ease of transactions	24.36	17.675	0.219	0.226	0.3825
Range of services provided	24.69	16.628	0.22	0.2185	0.382
Time saving capability	24.31	17.553	0.2025	0.1685	0.3835
Overall satisfaction level with the bank	24.32	18.505	0.099	0.1095	0.392

RESULT AND DISCUSSION

India's telecom sector is expanding at the fastest rate in the world, but the country is lagging behind other countries in terms of the use of mobile banking services. The elements that influence consumers' adoption of mobile banking services are examined in this study. The findings can also be applied to the ways in which banks might increase the uptake of mobile banking services. The first and most significant element influencing the use of mobile banking services is tied to telecom and bank services. First and foremost, the bank's provision of m-banking services is a crucial consideration. To promote quicker adoption rates, mobile banking should be time-saving and encourage favorable word-of-mouth. The fact that M-banking is completely safe and secure is the second crucial element. The third crucial element is how user-friendly the MBanking service is; users of all ages may effortlessly use features like fund transfers and account balance inquiries. The ability to save time is the fourth factor. Customers can save time by using M-banking, a service offered by the bank. The last component has to do with how satisfied clients are generally with the bank and its offerings. The greater the level of client satisfaction, the greater the uptake of mobile banking and other comparable technical advancements in service delivery.

CONCLUSION AND LIMITATION

The survey clearly shows that before establishing mobile banking services, banks must first earn the trust of their clients by providing excellent non-mobile services. In order to encourage customers to select mobile banking over non-banking services, banks must guarantee privacy, security, transparency, and convenience of transactions while developing mobile banking. Additionally, the study shows that using mobile banking to cultivate enduring customer relationships is possible.

The study does, however, have certain shortcomings. Only 100 respondents in New Delhi provided responses, so the sample size may not accurately reflect the total population. Second, there were financial and schedule limitations. Therefore, in order to address these issues, a more thorough investigation is required to comprehend the factors that contribute to the acceptance or non-adoption of mobile banking services in India.

This will enable bankers to more successfully sell their products and increase client satisfaction.

REFERENCES

1. Anand, N. (2014). Mobile banking zooms as India gets Smarter. Business Standard. Retrieved from: http://www.businessstandard.com/article/finance/mobilebanking-zooms-as-india-gets-smarter-114081100826_1.html
2. Ankit Kesharwani and Shailendra Singh Bisht (2011)"The impact of trust and perceived risk on internet banking adoption in India. An extension of technology acceptance model". www.emeraldinsight.com/0265-2323.htm
3. Balthazaar, D. (2023). Study of the Factors Affecting Customer Adoption on Mobile Banking in Commercial Banks of Sri Lanka . SJCC Management Research Review, 13(1), 53–79. <https://doi.org/10.35737/sjccmrr/V13/i1/2023/183>
4. Chawla D., & Joshi H. (2017). Consumer perspectives about mobile banking adoption in India: A cluster analysis. *International Journal of Bank Marketing*, 35(4), 616–636.
5. DIGITAL INDIA VISION AND VISION AREA (2019): Digital India Programme. <https://digitalindia.gov.in/content/vision-and-vision-areas>
6. Gupta A., & Arora N. (2017). Consumer adoption of m-banking: A behavioral reasoning theory perspective. *International Journal of Bank Marketing*, 35(4), 733–747.
7. Hela Ben Abdennebi, M-banking adoption from the developing countries perspective: A mediated model, *Digital Business*, Volume 3, Issue 2, 2023, 100065, ISSN 2666-9544, <https://doi.org/10.1016/j.digbus.2023.100065>.
8. Jahan, N. and Shahria, G. (2022), "Factors effecting customer satisfaction of mobile banking in Bangladesh: a study on young users' perspective", *South Asian Journal of Marketing*, Vol. 3 No. 1, pp. 60-76. <https://doi.org/10.1108/SAJM-02-2021-0018>
9. Kumar V. V. R., Lall A., & Mane T. (2017). Extending the TAM model: Intention of management students to use mobile banking:

- Evidence from India. Global Business Review. <https://doi.org/10.1177/0972150916666991>
10. Mohamed Shiraj M. (2015) - Factors Influencing the Adoption of Internet Banking: (Special Reference to the South Eastern Region, Sri Lanka)
11. Patil P., Tamilmani K., Rana N. P., & Raghavan V. (2020). Understanding consumer adoption of mobile payment in India: Extending Meta-UTAUT model with personal innovativeness, anxiety, trust, and grievance redressal. *International Journal of Information Management*, 54(May). <https://doi.org/10.1016/j.ijinfomgt.2020.102144>
12. PRIYA, R.; GANDHI, A. V.; SHAIKH; A. (2018a): "Mobile Banking: Consumer Perception towards Adoption", Benchmarking: An International Journal, vol. 25, n. 12: 743–762. <https://doi.org/10.1108/BIJ-01-2016-0009>
13. PRIYA, R.; GANDHI, A. V.; SHAIKH; A. (2018b): "Mobile Banking Adoption in an emerging Economy", Benchmarking: An International Journal, vol. 25, n. 2: 743–762. <https://doi.org/10.1108/BIJ-01-2016-0009>
14. Shankar A (2016) Factors Affecting Mobile Banking Adoption Behavior in India. *J Internet Bank Commer* 21: 160.
15. Singh, Sindhu & Srivastava, Rajesh. (2014). Factors Influencing the Adoption of Mobile Banking in India. *International Journal of E-Services and Mobile Applications*. 6. 1-15. [10.4018/ijesma.2014100101](https://doi.org/10.4018/ijesma.2014100101).
16. Sankaran, R., & Chakraborty, S. (2022). Factors Impacting Mobile Banking in India: Empirical Approach Extending UTAUT2 with Perceived Value and Trust. *IIM Kozhikode Society & Management Review*, 11(1), 7-24. <https://doi.org/10.1177/2277975220975219>
17. Safeena, Rahmath & Date, Hema & Kammani, Dr. Abdullah & Hundewale, Nisar. (2012). Technology Adoption and Indian Consumers: Study on Mobile Banking. *International Journal of Computer Theory and Engineering*. 4. 1020 – 1024. [10.7763/IJCTE.2012.V4.630](https://doi.org/10.7763/IJCTE.2012.V4.630).
18. Thaker, M. B. M. T; Pitchay, A. B. A; Thaker, H. B. M. T; Amin M. F. B. (2019): "Factors Influencing Consumers' Adoption of Islamic Mobile Banking Services in Malaysia", *Journal of Islamic Marketing*, JIMA-042018-0065. <https://doi.org/10.1108/JIMA-04-2018-0065>
19. Wadie, Nancy & Ibrahim, Siddig & Hasaballah, Abdel Hafiez. (2014). key factors affecting mobile banking adoption among banks customer. *international Journal of liberal arts and social Science*. 2. 112-122.
20. ZHOU, T. (2018): "Examining users' switch from online banking to mobile banking", *International Journal of Networking and Virtual Organisations*, vol. 18, n. 1: 51. <https://doi.org/10.1504/IJNVO.2018.090675>