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MOBILE BANKING IN INDIA: AN ANALYSIS USAGE, CHALLENGES AND CUSTOMER PERCEPTION

Saranya M[1*], Dr. T. Vetriprabhu[2]

[1]*B.com Student School of Arts, Humanities and Management, Jeppiaar University, Chennai*

[2]*Associate Professor School of Arts, Humanities and Management, Jeppiaar University, Chennai.*

[*]*Corresponding author*

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Abstract

Mobile banking has emerged as a revolutionary tool in the financial sector, allowing users to perform banking transactions using smartphones or tablets. The purpose of this study is to analyze the adoption, benefits, and challenges of mobile banking in India. With the increasing use of digital payments such as UPI, mobile banking has become essential for financial inclusion, convenience, and time efficiency. This research uses a combination of primary data (surveys of 100 users) and secondary data (RBI reports, bank publications) to understand customer satisfaction, usage patterns, and security awareness. The study highlights that while mobile banking significantly improves accessibility and transaction speed, security concerns and low digital literacy remain major challenges. The findings can guide banks in designing secure and user-friendly mobile banking applications.

Purpose:

- To explore the features and benefits of mobile banking.
- To identify challenges in adoption and usage.
- To analyze customer satisfaction and security awareness.
- To provide recommendations for improved mobile banking services.

Keywords: Mobile Banking, Digital Payments, UPI, Financial Inclusion, Customer Satisfaction, Security Awareness, Mobile Applications.

1. INTRODUCTION:

Banking has undergone a tremendous transformation over the past few decades, largely due to technological advancements. One of the most significant innovations in the financial sector is mobile banking, which allows customers to perform various banking activities through mobile devices such as smartphones and tablets. Mobile banking is not just a convenience but has become an essential tool for both urban and rural populations, providing access to financial services without the need to physically visit a bank branch.

1.1 Evolution of Mobile Banking:

Mobile banking started with SMS banking and USSD services, which allowed customers to check account balances or receive transaction alerts. With the rise of smartphones and internet penetration, banks began offering mobile applications that enable fund transfers, bill payments, and investment services. Today, digital payment systems like Unified Payments Interface (UPI) and integration with digital wallets have further enhanced the scope of mobile banking, making transactions instantaneous and secure.

Timeline Diagram Idea:

[SMS Banking] --> [Mobile Apps] --> [UPI & Digital Wallets] --> [AI & Smart Banking]

1.2Importance of Mobile Banking:

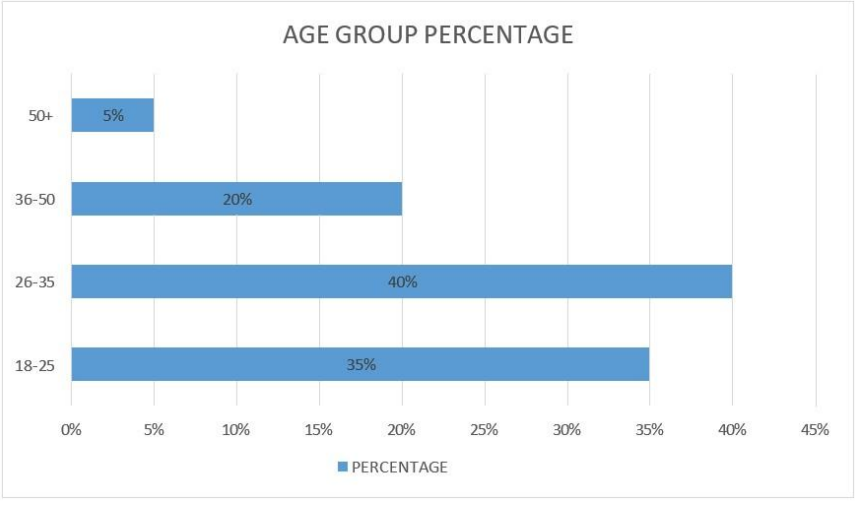
- Convenience: Customers can perform transactions 24/7 from any location.
- Time Efficiency: Instant fund transfers reduce dependency on physical banking.
- Financial Inclusion: Rural populations with limited bank access can easily manage finances.
- Cost-effectiveness: Reduces the cost associated with branch banking.

1.3Current Scenario in India:

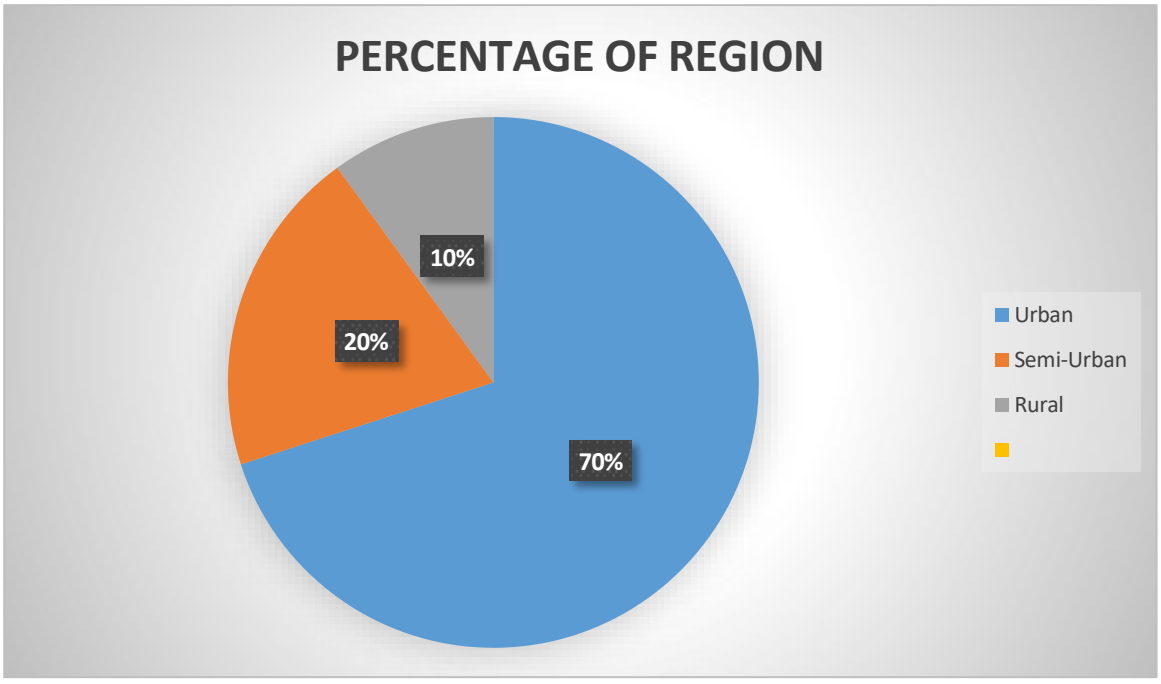
India has witnessed a rapid adoption of mobile banking due to smartphone proliferation and government initiatives like Digital India. According to the National Payments Corporation of India (NPCI), over 500 million mobile banking users exist in the country as of 2025. UPI transactions alone crossed 10 billion per month, reflecting the growing trust and dependence on mobile banking.

Key Trends and Statistics:

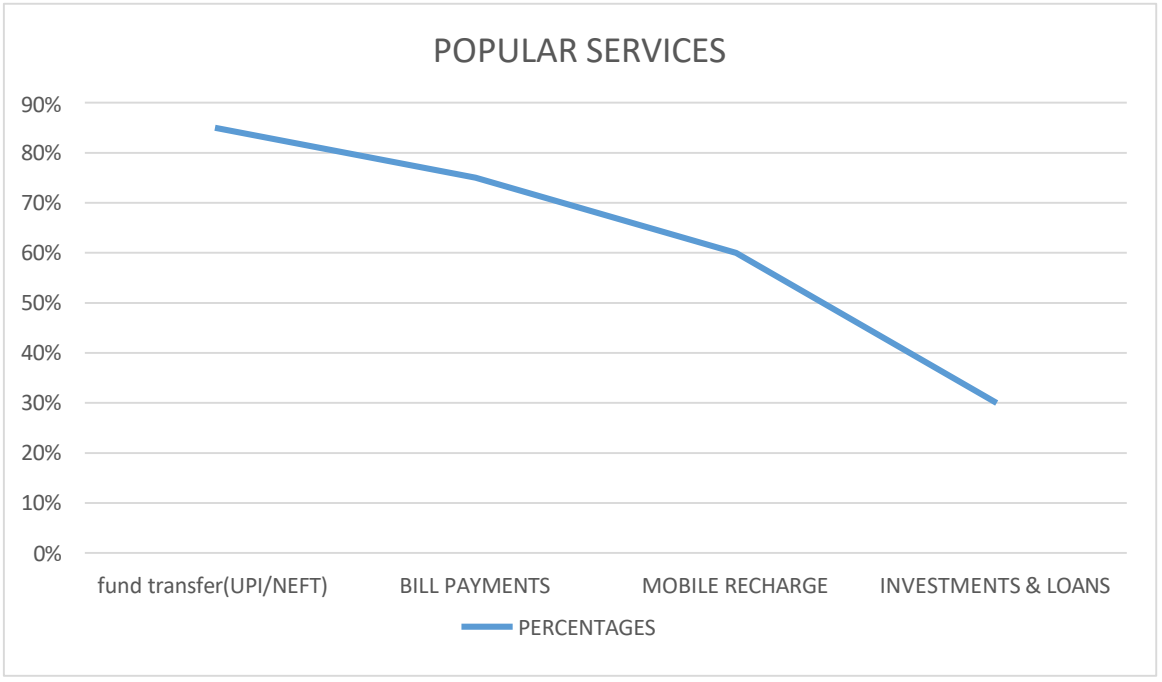
1. Mobile Banking Users by Age Group:



2. Mobile Banking Users by Region:



3. Popular Services Used via Mobile Banking:



1.4Challenges despite Adoption:

Despite its benefits, mobile banking faces challenges such as security threats, app glitches, low digital literacy, and transaction limits. These factors affect customer satisfaction and can hinder further adoption if not addressed properly.

1.5 Significance of the Study:

This study is significant as it explores user behaviour, satisfaction, and challenges associated with mobile banking. By analyzing both primary and secondary data, the study aims to provide insights that can help banks design more secure, user-friendly applications while promoting financial inclusion. The findings will also assist policymakers in understanding how technology-driven banking services can bridge gaps in accessibility and efficiency.

2. Research Methods:

The current study employs a descriptive and analytical research framework to evaluate the extent of usage, advantages, and difficulties associated with mobile banking in India. To achieve a balanced and dependable analysis, the study makes use of both primary and secondary sources of data.

2.1Research Design:

A descriptive research design has been adopted to clearly explain the existing condition of mobile banking, including user preferences, usage patterns, and problems encountered by customers. In addition, an analytical approach is applied to examine the collected data and derive meaningful interpretations.

2.2Sources of Data:

Primary Data:

Primary information was gathered through a structured questionnaire administered to mobile banking users. The questionnaire focused on aspects such as frequency of usage, services availed, level of satisfaction, and concerns related to security.

Secondary Data:

- Secondary information was obtained from the following sources:
- Reports published by the Reserve Bank of India (RBI)
- Publications of the National Payments Corporation of India (NPCI)
- Research journals and scholarly articles related to digital and mobile banking
- Official websites of major banks such as SBI, HDFC, and ICICI

2.3Sample Size and Sampling Technique:

The research was carried out with a sample size of 100 respondents. The respondents were chosen using the convenience sampling technique, which was considered appropriate due to time constraints and ease of data collection. The study included mobile banking users belonging to the age group of 18 to 50 years.

2.4 Tools for Data Collection:

The data required for the study was collected using the following tools:

- A structured questionnaire designed to gather information on mobile banking usage and user satisfaction.
- Online survey forms to reach a wider group of respondents efficiently.
- Direct personal interactions to obtain clear and accurate responses.
- Use of closed-ended questions to simplify data analysis.
- Collection of responses from users belonging to different age groups and occupations.

2.5Tools for Data Analysis:

The collected data was analyzed using the following methods:

- Percentage analysis to understand the proportion of responses.
- Tabular presentation for systematic arrangement of data.
- Bar charts to compare usage of various mobile banking services.
- Pie charts to show percentage distribution of responses.
- Microsoft Excel for data entry, calculation, and graphical representation.

2.6Limitations of the Study:

The study is subject to the following limitations:

- The research is based on a limited sample size, which may not represent the entire population.
- The study relies on primary data collected through questionnaires, which may contain biased responses.
- The findings are influenced by the personal opinions and perceptions of respondents.
- The research is confined to a specific geographical area, limiting generalization.
- Time constraints restricted the scope of the study and depth of analysis.

3. REVIEW OF LITERATURE:

Several studies have been conducted to understand the growth, adoption, and impact of mobile banking across different countries, including India. The existing literature highlights factors such as technology acceptance, customer satisfaction, security concerns, and financial inclusion as key aspects influencing mobile banking usage.

Singh and Sharma (2023) examined the adoption of mobile banking services in India and found that ease of use, perceived usefulness, and trust significantly influence customer acceptance. Their study revealed that younger users are more inclined towards mobile banking due to familiarity with smartphones and digital platforms.

Kumar and Gupta (2022) analyzed customer satisfaction levels in mobile banking services offered by public and private sector banks. The study concluded that service quality, transaction speed, and security features play a major role in improving customer satisfaction. However, issues related to technical errors and app downtime negatively affected user experience.

Rao (2021) studied the role of mobile banking in promoting financial inclusion in rural India. The research highlighted that mobile banking has reduced dependency on physical bank branches and enabled rural users to access basic banking services. Nevertheless, the study pointed out that low digital literacy and lack of awareness remain major barriers.

According to a report published by the Reserve Bank of India (RBI, 2020), mobile banking transactions have increased rapidly due to government initiatives such as Digital India and the introduction of Unified Payments Interface (UPI). The report emphasized the need for stronger cyber security measures to protect users from fraud and data breaches.

A study by Verma and Patel (2024) focused on security concerns in mobile banking. The findings indicated that although banks have implemented advanced security features like OTP and biometric authentication, many users are still unaware of safe banking practices. The study recommended regular customer education programs to enhance security awareness.

From the above review, it is evident that mobile banking has gained widespread acceptance due to convenience and technological advancement. However, challenges such as security risks, digital illiteracy, and technical issues continue to affect user confidence. This study attempts to build upon existing literature by analyzing the current usage pattern, challenges, and customer perception of mobile banking in India.

4. DATA ANALYSIS:

This section presents the analysis of data collected from 100 mobile banking users. The data was analysed using percentage analysis and represented through tables and diagrams to clearly understand user behaviour, service usage, and challenges faced in mobile banking.

4.1Usage of Mobile Banking Services

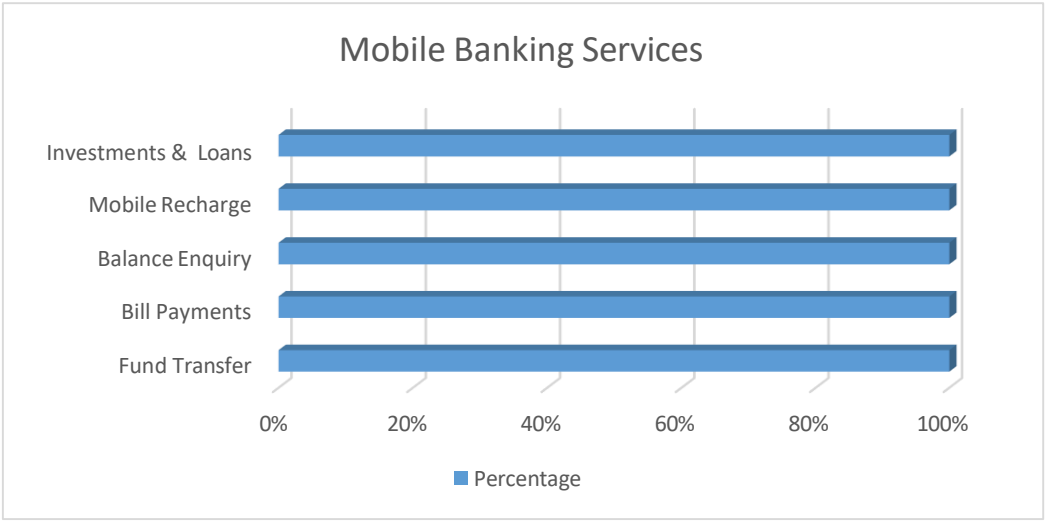
The respondents were asked about the mobile banking services they frequently use.

Mobile Banking Service	No. of Respondents	Percentage
Fund Transfer (UPI/NEFT)	85	85%
Bill Payments	75	75%
Mobile / DTH Recharge	60	60%
Balance Enquiry & Statements	70	70%
Investments & Loan Payments	30	30%

Analysis:

The table shows that fund transfer services are the most commonly used feature of mobile banking, followed by bill payments and balance enquiry services. Investment-related services show comparatively lower usage among respondents.

Diagram 1:



Bar Chart – Usage of Mobile Banking Services.

Interpretation:

The bar chart clearly indicates that transactional services such as fund transfers dominate mobile banking usage, while advanced services like investments are less preferred.

4.2User Satisfaction Level:

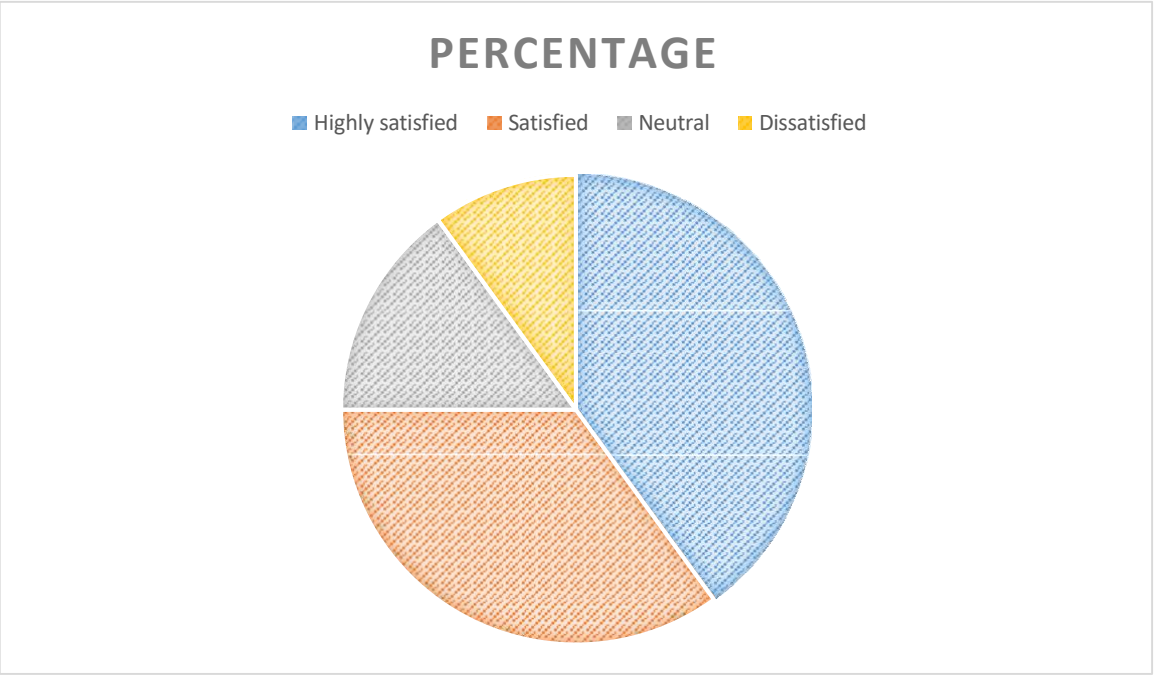
Respondents were asked to rate their satisfaction with mobile banking services.

Satisfaction Level	Respondents	Percentage
Highly Satisfied	40	40%
Satisfied	35	35%
Neutral	15	15%
Dissatisfied	10	10%

Analysis:

A majority of users (75%) are either satisfied or highly satisfied with mobile banking services, indicating a positive user perception.

Diagram 2:



Pie Chart – Satisfaction Level of Users

Interpretation:

The pie chart reflects a high level of satisfaction among users, though a small percentage still experience dissatisfaction due to technical or security issues.

4.3Challenges Faced by Mobile Banking Users:

The respondents were also asked about problems faced while using mobile banking.

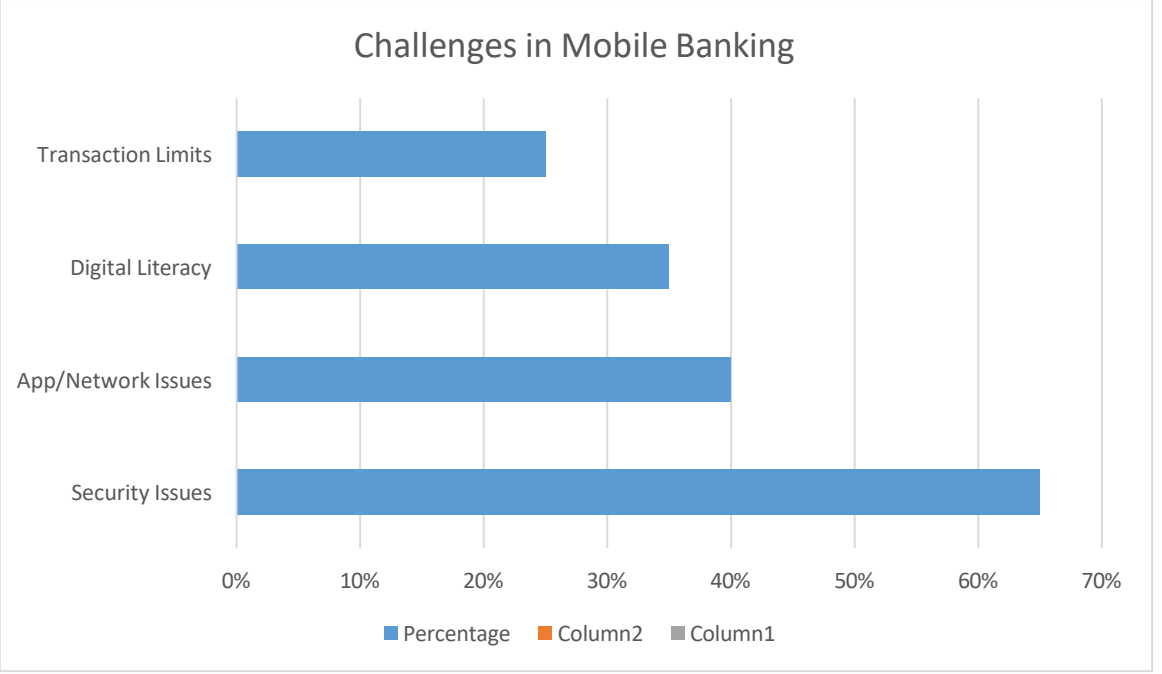
Challenges	**Respondents**	**Percentage**
Security Concerns	65	65%
App/ Network Issues	40	40%
Lack of Digital Skills	35	35%
Transaction Limits	25	25%

Analysis:

Security concerns are identified as the major challenge, followed by technical issues and lack of digital literacy.

Diagram 3:

Bar Chart – Challenges in Mobile Banking



Interpretation:

The diagram highlights that despite high adoption, security-related fears remain the biggest obstacle to the effective use of mobile banking services.

SUGGESTIONS / RECOMMENDATIONS:

Based on the findings of this study, the following suggestions are proposed to enhance mobile banking services in India:

Strengthen Security Measures:

Banks should implement advanced security protocols such as multi-factor authentication, biometric verification, and real-time fraud alerts to minimize security risks.

Promote Digital Literacy:

Digital literacy programs and awareness campaigns should be conducted, especially for rural and elderly users, to ensure safe and effective usage of mobile banking applications.

Enhance Mobile Banking App Performance:

Mobile banking applications should be user-friendly, fast, and free from technical glitches to improve overall customer experience.

Expand Customer Support Services:

24/7 customer support with prompt grievance redressal should be provided to help users resolve issues efficiently.

Increase Service Offerings and Transaction Limits:

Banks can introduce additional services such as personalized investment guidance, AI-based assistance, and increase transaction limits to encourage wider adoption.

CONCLUSION

The study clearly indicates that mobile banking has become an essential component of the modern banking system in India. The rapid growth of smartphone usage, affordable internet access, and the introduction of digital payment platforms such as UPI have significantly increased the adoption of mobile banking services among customers. The findings of the study reveal that mobile banking is widely used for fund transfers, bill payments, and balance enquiries, highlighting its convenience and time-saving nature.

The analysis further shows that a majority of users are satisfied with mobile banking services due to their ease of use, accessibility, and speed of transactions. Mobile banking has also played a crucial role in promoting financial inclusion by enabling people from different regions to access banking services without visiting physical bank branches. This has reduced dependency on traditional banking methods and improved overall customer experience.

However, despite its advantages, the study identifies certain challenges such as security concerns, technical issues, and lack of digital literacy among some users. These issues may affect user confidence and restrict the full potential of mobile banking. Therefore, banks need to strengthen security measures, improve application reliability, and conduct awareness programs to educate customers about safe mobile banking practices.

In conclusion, mobile banking has transformed the way banking services are delivered and accessed in India. With continuous technological advancements and proper user education, mobile banking has the potential to become more secure, inclusive, and efficient, thereby contributing significantly to the growth of the digital economy.

Declaration of Conflicting Interests

The authors declare no potential conflicts of interest with respect to the research, authorship and publication of this article.

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