



**International Journal of Advanced Research in Arts,
Science, Engineering & Management (IJARASEM)**

Volume 11, Issue 2, March 2024



**INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA**

IMPACT FACTOR: 7.583



A Study on the Role of Mobile Banking on Financial Inclusion

Bidisha Das, Dr. Lourden Selvamani

Assistant Professor, Department of Finance, CMS Business School, JAIN (Deemed-to-be University),
Bengaluru, India

Post Graduate Student, MBA, CMS Business School, JAIN (Deemed-to-be University), Bengaluru, India

ABSTRACT: This study explores the transformative role of mobile banking in advancing financial inclusion, focusing on demographic characteristics, usage patterns, motivations, and barriers related to mobile banking adoption. With the spread of mobile technology, particularly in developing regions, mobile banking has emerged as a promising tool to expand access to financial services among underserved populations. Key findings from the survey taken from 82 people indicate the importance of targeting younger demographics, especially those in the 18-24 age bracket, for mobile banking initiatives due to their familiarity with technology. Despite urban areas dominating current usage, efforts to extend services to rural communities are crucial for equitable access. Enhancing user experience and security features within mobile banking apps, addressing common barriers, and personalizing services based on user preferences are essential strategies for encouraging adoption and long-term usage. Collaboration between financial institutions, government initiatives, and stakeholders is vital for driving progress in financial inclusion through mobile banking. Overall, the study underscores mobile banking's potential to create a more inclusive financial ecosystem, empowering individuals across all demographics. Through technology, collaboration, and user-centric approaches, stakeholders can work together to advance towards a more equitable financial future for all.

KEYWORDS: Financial Inclusion, Mobile Banking, Bank Account, Empowerment, Technology, Government Initiatives, Cybersecurity, Financial Literacy, Financial Behavior.

I. INTRODUCTION

Financial inclusion, which involves ensuring access to essential financial services such as banking, credit, and insurance, is vital for providing equal opportunities and enabling individuals to manage their finances effectively, save for the future, and invest in various opportunities. This inclusive approach plays a crucial role in reducing poverty and inequality by empowering people to start businesses, create employment opportunities, and improve their living standards. Especially, it empowers women by giving them control over their finances, thereby promoting independence. Strategies aimed at promoting financial inclusion include expanding access to financial services through technological innovations, reducing costs through the provision of low-cost accounts and products, and improving financial literacy through educational programs. This multifaceted approach is essential for addressing complex socio-economic issues such as poverty and inequality, ultimately contributing to overall economic development and building a better future for individuals and their families.

Mobile banking has emerged as a transformative tool in efforts to promote financial inclusion, particularly in developing economies and among various communities. It has revolutionized access to financial services for individuals who were traditionally excluded due to factors such as geographical limitations, technology infrastructure, financial literacy, or cybersecurity risk. The widespread availability of mobile phones has enabled mobile banking to reach remote areas and overcome physical barriers, while its affordability compared to traditional banking infrastructure makes it accessible to low-income populations. User-friendly mobile banking apps ensure that individuals with limited digital experience can manage their finances easily, facilitating account opening, transactions, and access to features like savings and loans, thereby empowering individuals and entrepreneurs alike. Beyond individual benefits, mobile banking also promotes financial security by facilitating the transition from cash to digital payments, stimulating economic participation, and enhancing financial literacy. Despite challenges such as digital literacy gaps and cybersecurity concerns, responsible innovation holds the potential to further enhance mobile banking's role in driving financial empowerment and inclusive economic development.

This study explores the impact of mobile banking on promoting financial inclusion, a critical aspect of economic development and poverty reduction. With the widespread adoption of mobile technology, particularly in developing



regions, mobile banking has emerged as a promising tool to broaden access to financial services among underserved populations. The study employs a snowball sampling method, a quantitative analysis of survey data to provide a comprehensive understanding of mobile banking's role in advancing financial inclusion.

II. REVIEW OF LITERATURE

Neelam., Sonali Bhattacharya (2023) in their recent study has identified that mobile banking facilitates access to financial services and promotes financial inclusion. The study investigates factors that notably influence the utilization of mobile payment applications, contributing to financial inclusivity. Additionally, it observes a higher proportion of male users compared to female users in mobile technology adoption. **Dr. Lalitha B., Lavanya Balaji (2022)** in their recent study clearly stated that mobile banking and mobile phones are integral for conducting banking activities among customers.

Hajira Begum (2023) investigates the perceived significance of various aspects of service quality in digital banking from the perspective of customers. The research reveals that dimensions such as responsiveness, reliability, assurance, empathy, system availability, and privacy are all deemed significant in digital banking practices. Among these dimensions, responsiveness emerges as the most influential factor in determining digital banking service quality, followed by assurance, empathy, reliability, privacy, and system availability. Enhancing the service delivery of digital banking is essential for banks, particularly in the context of digital transformation.

Dr. Lalitha B., Lavanya Balaji (2022) in their recent study clearly stated that mobile banking and mobile phones are integral for conducting banking activities among customers. Simply by registering or linking their mobile numbers to their bank accounts, individuals can perform various financial transactions, from payments to balance checks, and more. According to the conducted study, most respondents favor mobile banking over traditional banking methods. This suggests that mobile banking significantly aids both banks and customers in conducting financial activities more effectively and efficiently. Additionally, mobile banking serves as a tool for financial inclusion by increasing the number of transactions and accessibility to financial operations among users. It offers convenience and flexibility in its usage, thereby promoting financial inclusivity.

Mr. Mahabub Basha, Dr. Kethan, Dr. Rajasulochana A.L (2022) discussed the use and adoption of mobile payments have become increasingly common, with many individuals having multiple payment apps on their mobile phones, such as G-Pay, PhonePe, and Paytm. Nowadays, people often prefer using mobile apps instead of carrying cash, particularly in urban areas. Usage and adoption of mobile payments are less frequent in rural or semi-urban areas, possibly due to various demographic factors, government policies on financial inclusion and literacy, concerns about security, and the possession of Android phones. Researchers have also observed variations in the usage and adoption of mobile payments based on gender and income levels in urban areas.

Ashish Kumar, Sanjay Dhingra, Vikas Batra and Harish Purohit (2020) on their paper discussed that after 2016 demonetization initiative by the Government of India, there has been a significant surge in online and mobile banking transactions in the country. The government's efforts to promote cashless payments and branchless banking, coupled with urbanization and busy lifestyles, have fueled the growth of mobile banking. Banks and online intermediaries view this trend as an opportunity to engage customers and enhance their mobile banking experience. However, factors driving mobile banking adoption vary across countries, necessitating a focused exploration of adoption intentions in India to create an enabling environment for mobile banking adoption and advance financial inclusion and digital economy objectives through targeted policies and initiatives.

Alka Singh (2017) discussed how the government's financial inclusion initiative aims to provide basic financial services to all. Technology plays a crucial role in this initiative, enabling the implementation of various services aimed at extending banking services economically. Banks and financial institutions must invest in technology to deliver financial services transparently, fairly, and equitably. Addressing challenges in the implementation of technological solutions is essential for their effectiveness is essential to ensure their effectiveness in expanding financial inclusion efforts.

Geetha and V Malarvizhi (2012) discussed about the factors affecting customer's acceptance of electronic banking services which indicates the concern of the customers regarding privacy and security. There are many factors including security, privacy, and awareness, increased customer acceptance of e-banking, with the possibility that customers would be willing to use the e-banking if banks provided necessary guidance and ensured account safety.



Dr. K. Martina Rani (2010) stated that mobile banking plays a crucial role in a country's financial inclusion strategy, particularly in reaching rural populations quickly. Challenges such as interoperability between banks, mobile network operators, and technology providers, along with regulatory requirements, complicate its growth. Transaction costs and scalability are key considerations for banks and microfinance institutions, with mobile banking expected to replace traditional card systems in the future. Standardization, education, and regulations are vital for success.

Edgar, Dunn and Company, Management Consultants (2007) identified that the effectiveness of Mobile Financial Services for those lacking access to traditional banking facilities hinges on both consumer education and a robust business model. It is emphasized that comprehensive consumer education regarding the utilization and trustworthiness of financial services in tandem with mobile technology is essential for widespread adoption. This education is crucial for enabling more individuals to tap into the financial resources they require. Additionally, the success of Mobile Financial Services is contingent upon the establishment of a viable business model by key stakeholders such as financial institutions and mobile carriers. Failure to develop such a model could impede the effectiveness of these services.

Petrova K. (2002) discussed that mobile banking encompasses the capability to carry out banking operations using a mobile device or, in a broader sense, executing financial transactions through a mobile platform. This definition is comprehensive as it encompasses not only fundamental services like checking bank account statements and transferring funds but also electronic payment alternatives and information-based financial services.

III. RESEARCH METHODOLOGY

3.1 OBJECTIVES OF THE STUDY

1. To assess the current landscape of mobile banking and extent of financial inclusion.
2. To examine Mobile Banking adoption and usage patterns of the individuals.
3. To explore socio-economic outcomes and behavioural impacts to financial management, savings behaviour, spending patterns, and transaction decisions among mobile banking users.
4. To identify barriers and challenges of mobile banking services.

3.2 PROBLEM STATEMENT

The challenges in financial inclusion outlines the challenges faced by youths, females, and students in accessing mobile banking services and achieving financial inclusion in urban areas. It highlights issues such as limited financial literacy, digital access, and smartphone ownership, particularly in underserved communities. Gender bias within traditional financial institutions further hampers females' access to mobile banking. Students encounter financial constraints and technological barriers, compounded by concerns about transaction fees and security risks. Studies reveal a lack of awareness and financial education among these demographics, exacerbating the challenges. Overall, these factors impede efforts to promote financial inclusion through mobile banking, underscoring the need for targeted interventions and improved access to financial services.

3.3 DATA COLLECTION & METHODS

The primary data analysis utilized snowball sampling alongside surveys or questionnaires to gather quantitative data from a sample population. The focus was on variables such as mobile banking usage, encompassing the frequency and types of transactions conducted through mobile banking platforms. Additionally, financial inclusion indicators were examined, including access to formal financial services, savings behavior, borrowing habits, and income stability. Socio-economic factors such as age, gender, income level, education, employment status, household size, and geographic location were also considered. Moreover, technology access variables, such as mobile phone ownership, smartphone usage, and internet connectivity, were assessed. The survey targeted a sample size of 82 individuals. The questions in the form were designed to capture insights into how respondents engage with mobile banking services and their broader financial inclusion status.

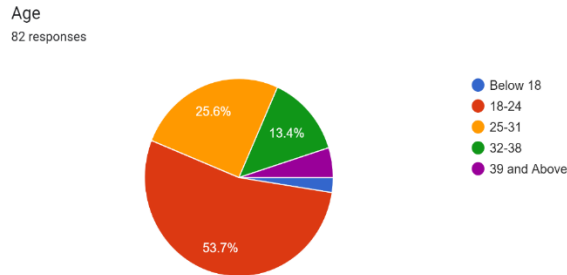
3.4 SCOPE OF THE STUDY

The study investigates the implementation of mobile banking initiatives aimed at promoting financial inclusion among Indian students, youths, and women, while also considering its impact across diverse regions or countries. Patterns of adoption and usage are analyzed, along with factors influencing decisions, usage behavior, and barriers to adoption. Furthermore, the study evaluates the effects of mobile banking initiatives on various aspects of financial inclusion, such as access to services, usage of formal products, affordability, literacy, empowerment, and resilience to economic shocks. Finally, it identifies challenges and opportunities associated with mobile banking, encompassing infrastructure limitations, interoperability, cybersecurity, trust-building measures, and the role of innovation.



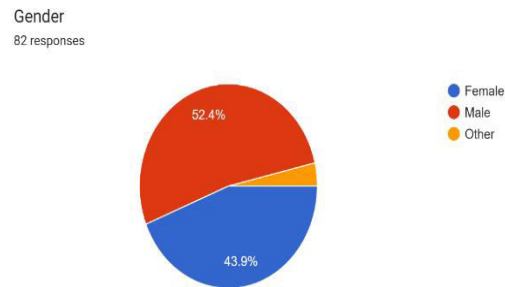
IV. DATA ANALYSIS & INTERPRETATION

Fig 1.1: Age of the respondents



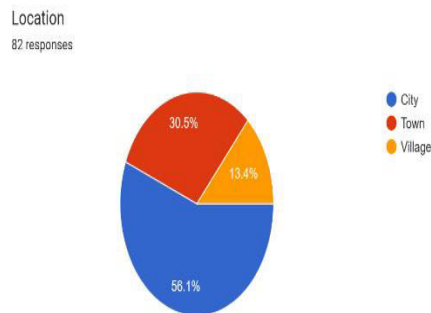
The graph shows the distribution of respondents across different age groups. It indicates that most respondents fall within the 18-24 age bracket, constituting 53.66% of the sample. This suggests that younger individuals are more likely to participate in the survey compared to other age groups.

Fig 1.2: Gender of the respondents



The graph shows the distribution of respondents across different age groups. It indicates that most respondents fall within male, constituting 52.40% of the sample. This suggests that male participants are more than female in using mobile banking services.

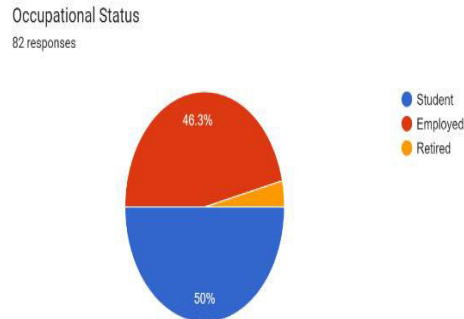
Fig 1.3: Geographical location of the respondents



This graph displays the distribution of respondents based on their location, categorized into villages, towns, and cities. The data indicates that a significant portion of respondents reside in cities, representing 56.10% of the sample. This reflects the urban-centric nature of mobile banking usage and financial inclusion initiatives.

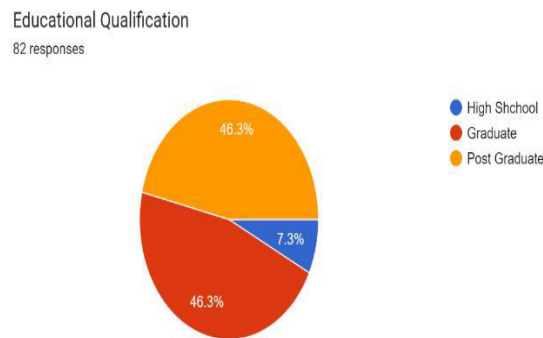


Fig 1.4: Occupational Status of the respondents



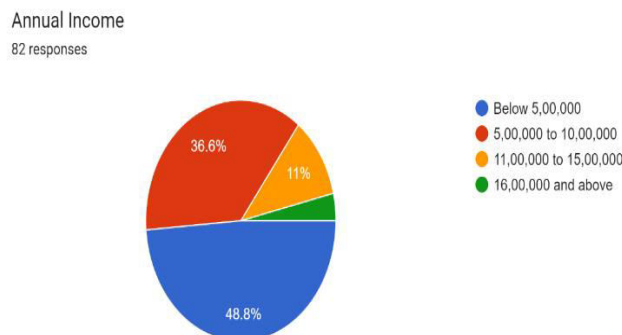
Here, respondents are categorized based on their employment status. Most respondents are students, comprising 50% of the sample, followed by employed individuals at 46.34%. This suggests that students and employed individuals are more likely to participate in the survey compared to retirees.

Fig 1.5: Educational Qualifications of the respondents



This graph presents the distribution of respondents according to their education level. The data shows a relatively balanced distribution across educational categories, with graduates and postgraduates each constituting 46.34% of the sample. This indicates a diverse educational background among respondents.

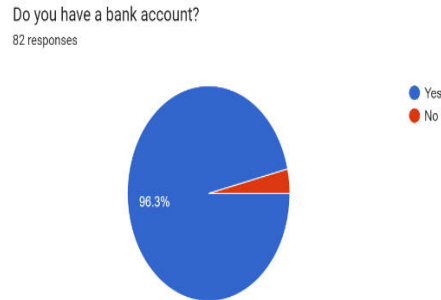
Fig 1.6: Annual Income of the respondents





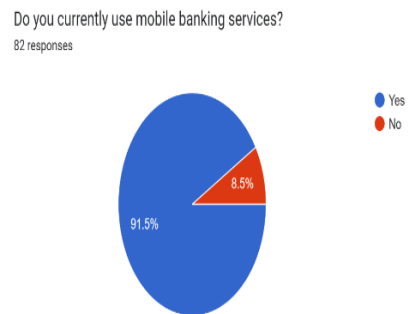
Respondents are categorized based on their income brackets in this table. Most respondents belong to the income bracket "Below 5,00,000," representing 48.78% of the sample. This suggests that a significant portion of respondents has a lower income level, which may influence their financial behaviors and mobile banking usage.

Fig 1.7: Bank Accounts owned by the respondents



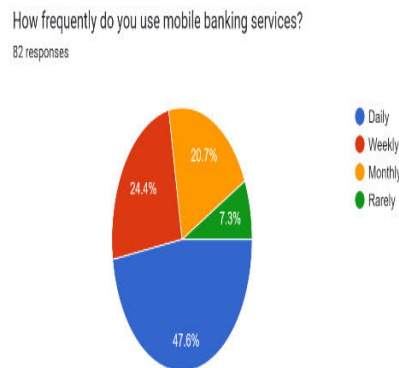
Here, the distribution of respondents based on whether they own a bank account is presented. The data shows that many respondents (96.34%) own a bank account.

Fig 1.8: Mobile banking services used by the respondents



Here, the distribution of respondents based on whether they own a bank account is presented. The data shows that many respondents (91.50%) use mobile banking services.

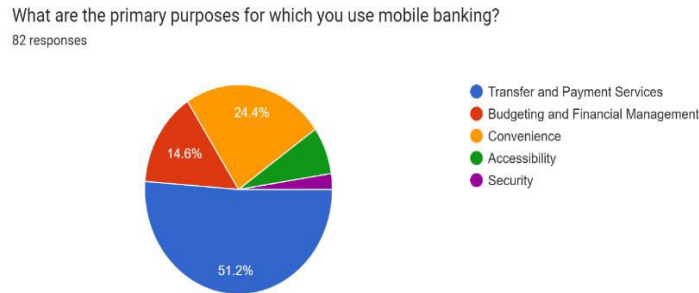
Fig 1.9: Frequency of mobile banking services used by the respondents





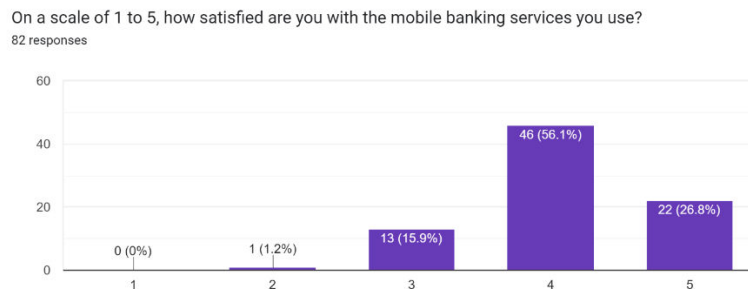
This graph illustrates the frequency of mobile banking usage among respondents. The data reveals that a large proportion of respondents use mobile banking daily, accounting for 47.56% of the sample. This indicates a high level of engagement with mobile banking services among the surveyed population.

Fig 1.10: Purpose of using mobile banking services by the respondents



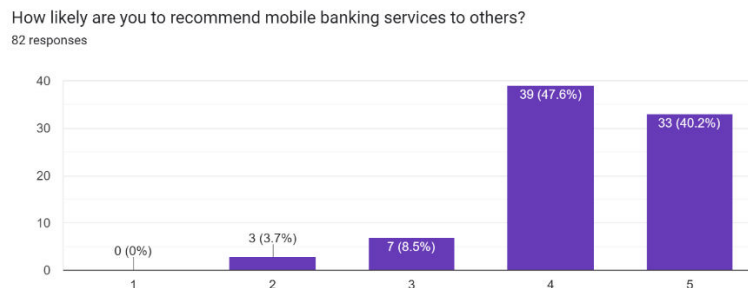
Here, respondents' reasons for using mobile banking are listed. The most common reason cited is "Transfer and Payment Services," with 51.22% of respondents indicating this as a primary motivation for using mobile banking. This highlights the importance of convenience and accessibility in driving mobile banking adoption.

Fig 1.11: Satisfaction with the mobile banking services of the respondents



Respondents' satisfaction levels with mobile banking services features are depicted in this graph. The data shows that many respondents (56.10%) are satisfied with mobile banking services. This suggests a positive perception of the service measures implemented by mobile banking providers.

Fig 1.12: Recommendation of mobile banking services by the respondents



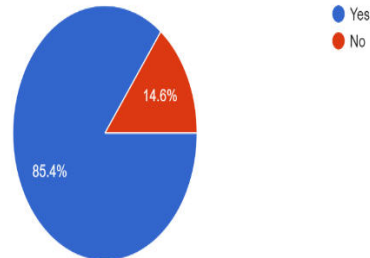
The data shows that many respondents (47.60%) are recommend others to use mobile banking services.



Fig 1.13: Issues in using mobile banking services faced by the respondents

Have you ever faced any issues accessing or using mobile banking services?

82 responses

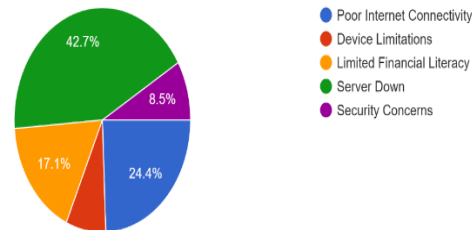


The data shows that most respondents (85.40%) are face issues and challenges in using mobile banking services.

Fig 1.14: Types of issues faced by the respondents in mobile banking

If yes, please specify the reason for facing the issues.

82 responses

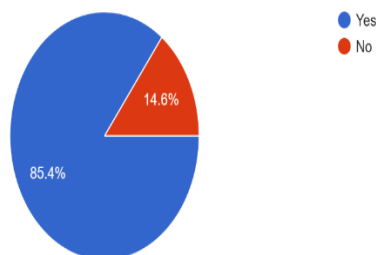


This graph outlines the barriers preventing respondents from adopting mobile banking. The most frequently cited barrier is "Server Down," mentioned by 42.68% of respondents. Other barriers include poor internet connectivity and limited financial literacy, underscoring the challenges faced in enhancing mobile banking accessibility.

Fig 1.15: Mobile banking helps in accessing products and services

Did mobile banking help you in accessing financial services and products?

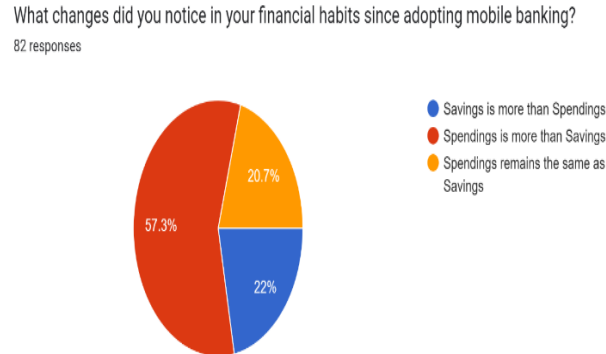
82 responses



The data shows that most respondents (85.40%) can easily access to financial services through mobile banking.

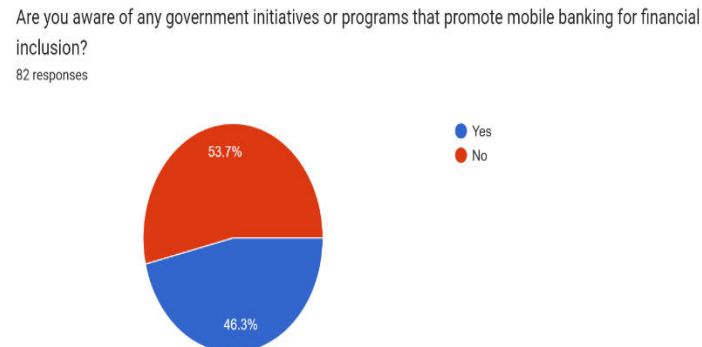


Fig 1.16: Financial Habits of the respondents



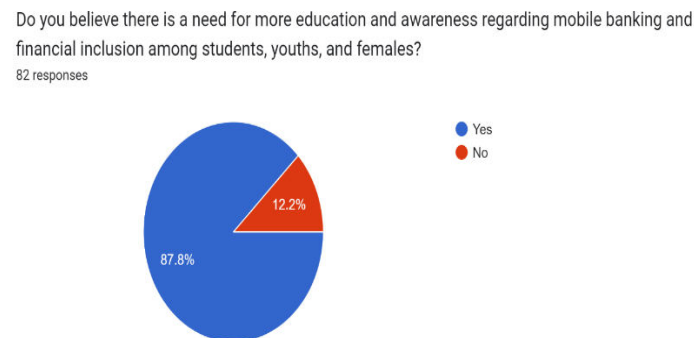
Respondents' comparison of savings and spendings is presented. The data indicates that a significant portion of respondents (56.30%) reported spendings being more than savings, highlighting potential financial challenges and the need for improved financial management practices.

Fig 1.17: Aware of government awareness by the respondents



Here, respondents' awareness of government initiatives promoting mobile banking and financial inclusion is presented. The data shows that 46.34% of respondents are aware of such initiatives.

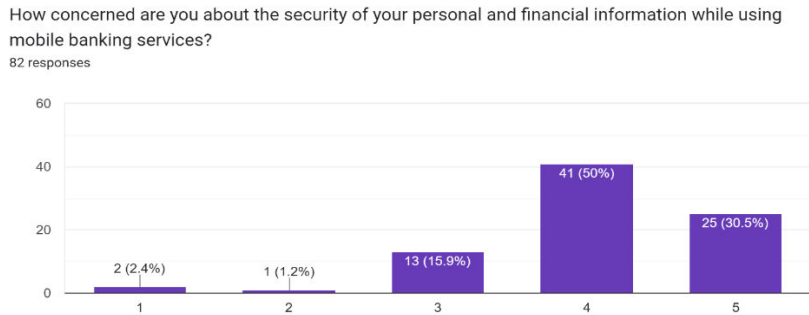
Fig 1.18: Need of financial literacy of the respondents



This table outlines respondents' views on the necessity of awareness and education regarding financial inclusion and mobile banking. Most respondents (87.80%) believe that such awareness and education are necessary.

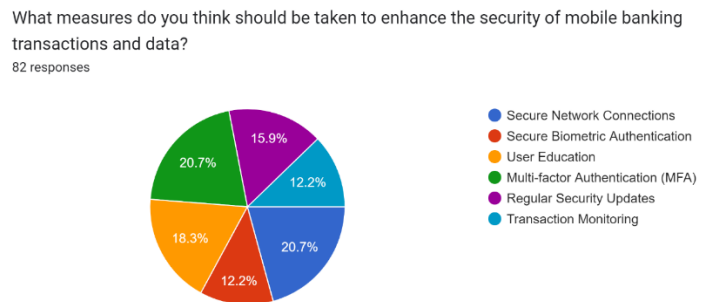


Fig 1.19: Security of the respondents in using mobile banking



Respondents' concern with mobile banking security features are depicted in this table. The data shows that many respondents (50%) are concerned with mobile banking security.

Fig 1.20: Recommendations for safety and security of respondents in using mobile banking



According to respondents, three measures stand out as equally important: secure biometric authentication, regular security updates, and secure network connections, each accounting for approximately 20.7% of the responses. Other options mentioned in the survey include multi-factor authentication (MFA) and transaction monitoring, each receiving 12.2% of the responses. User education was cited as important by 8.3% of respondents.

V. FINDINGS & DISCUSSION

This study delves into the complex interplay between mobile banking and financial inclusion, revealing key insights into user demographics, behaviors, and attitudes. The data presented includes various insights into respondents' demographics, behaviors, and perceptions regarding mobile banking services and financial inclusion initiatives. Most respondents are young adults aged 18-24, predominantly male, residing in urban areas, and primarily students or employed individuals. A large proportion owns bank accounts and utilizes mobile banking services frequently, primarily for transfer and payment services. While many express satisfactions with mobile banking, issues such as server downtime and security concerns persist. Despite these challenges, respondents acknowledge the convenience and accessibility afforded by mobile banking and express a need for greater financial literacy and awareness initiatives. Additionally, there is a notable concern among respondents regarding the security of mobile banking, with recommendations including secure biometric authentication, regular security updates, and secure network connections to enhance safety.

Overall, the study emphasizes mobile banking's potential to promote financial inclusion by offering convenient and accessible services to a broader audience. To maximize its impact, the research suggests addressing infrastructure challenges, improving financial literacy, and tailoring services to meet diverse user needs. These insights provide valuable guidance for policymakers and financial institutions aiming to leverage mobile banking for advancing financial inclusion initiatives.



VI. CONCLUSION

In conclusion, the study underscores the transformative potential of mobile banking in advancing financial inclusion, particularly among underserved populations. By analyzing demographic characteristics, usage patterns, motivations, and barriers related to mobile banking, several key insights emerge. The prevalence of younger demographics highlights the importance of targeting this segment for mobile banking initiatives, leveraging their familiarity with technology to expand services. However, efforts to extend mobile banking to rural communities are essential for equitable access, necessitating infrastructure improvements and targeted awareness campaigns. Enhancing user experience and security features within mobile banking apps is crucial for maintaining trust and confidence, while personalization of services based on user preferences can enhance engagement and satisfaction. Collaboration among stakeholders is paramount for driving progress in financial inclusion, enabling the creation of a more inclusive and equitable financial ecosystem. Overall, mobile banking holds immense promise as a tool for promoting financial access and empowerment across diverse demographics, paving the way towards a more inclusive financial future for all.

ACKNOWLEDGEMENT

I wish to take this opportunity to express my gratitude to my faculty mentor, **Dr Lourden Selvamani, Assistant Professor of Finance, CMS Business School, Jain (Deemed-to-be University), Bengaluru** for his valuable advice, suggestions, support, and insights that have been instrumental to complete this thesis. Lastly, I would like to thank all the amazing people of their cooperation and motivation that contributed to the success of this paper.

REFERENCES

1. Singh, A. S., Venkataramani, B., & Ambarkhane, D. (2014). Role of mobile banking in financial inclusion. *Available at SSRN 2485777*.
2. Sahoo, D., & Pillai, S. S. (2017). Role of mobile banking servicescape on customer attitude and engagement: An empirical investigation in India. *International Journal of Bank Marketing, 35*(7), 1115-1132.
3. Liu, Z., Min, Q., & Ji, S. (2009, May). An empirical study on mobile banking adoption: The role of trust. In *2009 Second International Symposium on Electronic Commerce and Security* (Vol. 2, pp. 7-13). IEEE.
4. Kamboj, S., Sharma, M., & Sarmah, B. (2022). Impact of mobile banking failure on bank customers' usage behaviour: the mediating role of user satisfaction. *International Journal of Bank Marketing, 40*(1), 128-153.
5. Akturan, U., & Tezcan, N. (2012). Mobile banking adoption of the youth market: Perceptions and intentions. *Marketing Intelligence & Planning, 30*(4), 444-459.
6. Akter, U., Anwar, S. R., Mustafa, R., Ali, Z., & Cumilla, B. (2021). Revisiting the impact of mobile banking on financial inclusion among the developing countries. *International Journal of Financial Research, 12*(2), 62-74.
7. Etim, A. S. (2014). Mobile banking and mobile money adoption for financial inclusion. *Research in Business and Economics Journal, 9*, 1.
8. Asfaw, H. A. (2015). Financial inclusion through mobile banking: Challenges and prospects. *Research Journal of Finance and Accounting, 6*(5), 98-104.
9. Andrianaivo, M., & Kpodar, K. (2012). Mobile phones, financial inclusion, and growth. *Review of Economics and Institutions, 3*(2), 30.
10. Behl, A., & Pal, A. (2016). Analysing the barriers towards sustainable financial inclusion using mobile banking in rural India. *Indian Journal of Science and Technology*.
11. Ouma, S. A., Odongo, T. M., & Were, M. (2017). Mobile financial services and financial inclusion: Is it a boon for savings mobilization?. *Review of development finance, 7*(1), 29-35.



INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA



International Journal of Advanced Research in Arts, Science, Engineering & Management (IJARASEM)

| Mobile No: +91-9940572462 | Whatsapp: +91-9940572462 | ijarasem@gmail.com |

www.ijarasem.com