

Exploring Mobile Banking Adoption and Usage Patterns: A Study of Bank Customers in Coastal Karnataka

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Abstract

This study examines the acceptance and behaviour of users towards mobile banking across bank customers in Coastal Karnataka which is well known for high literacy, good banking infrastructure and rising digital penetration. The study investigates adoption determinants, customer satisfaction, perceived benefits, and ongoing barriers to sustained usage. The Study found that mobile banking is primarily used by youth, urban and educated people with 68% of users in the age of 18–25. The study found that nearly three-quarters (76%) of consumers use mobile banking apps once per week or more often to pay bills (48%) and move money (34%). Convenience (54%) and 24/7 access (20%) are the biggest factors for adoption, whereas lack of trust in digital transactions (24%) and unsatisfactory user interface (18%) are the greatest barriers. And, while nearly two-thirds of users—64%—report being satisfied and 86% recognize that mobile apps save them a lot of time, 52% feel neutral, again, about security when related to mobile apps. The research also reveals a solid appetite for better personalized features including financial advice (44%) as well as to boost security levels as 32% said they'd likely switch apps to ensure better security with financial apps. While designs that are user-centric, initiatives focusing on digital literacy, multilingual approaches & sound cybersecurity, will act as a catalyst in driving inclusive & sustained adoption.

Keywords: Mobile Banking, Financial Inclusion, Technology Adoption

Introduction

The development of digital technologies has transformed the landscape of financial services, especially the recent rise of the mobile– banking (m-banking) sector. Mobile banking (use of smartphones and mobile devices to access various banking services like balance inquiry, funds transfer, bill payment, and account management) has become one of the most dominant means for driving the financial inclusion agenda and improving customer convenience (Sharma & Sharma, 2019). Mobile banking has gained momentum in India in recent years, spurred by the government's vision for a Digital India and the implementation of the Unified Payments Interface (UPI), and the rapid penetration of smartphones (Reserve Bank of India [RBI], 2022). Chosen for its unique social and economic setting, Coastal Karnataka, which contains the three

districts of Dakshina Kannada, Udupi, and Uttara Kannada, is an ideal region to study m-banking adoption patterns with its high literacy rate, relative wealth in banking infrastructure, and emerging digital access. While mobile banking services have become more accessible than ever, they are not widely used. Studies show that age, education, income level, knowledge of technology and perceived safety affect customer adoption of mobile banking (Gupta & Arora, 2020; Venkatesh et al., 2012). With the mobile revolution opening up new avenues for digitalisation, even the remote areas of Coastal Karnataka we have seen a growth in access to smartphones, however data privacy, transaction safety and lack of digital literacy remain the most crucial barriers to consumer acceptance (Rao, 2021; Raut et al., 2020). A study by Singh et al. (2020) Trust in banking institution and ease of use are the prominent predictors of continued m-banking usage.

Moreover, with the outbreak of the COVID-19 pandemic, this shift towards digital banking has accelerated as customers have tried to avoid physical contact and sought to gain access to banking services remotely (Chauhan & Pillai, 2021). This activity discrepancy emphasizes the need to better evaluate not just initial adoption but endurance patterns as well. Perceived usefulness and perceived ease of use are central to technology acceptance according to Davis (1989) Technology Acceptance Model (TAM), a well-established framework used in m-banking research (Davis, 1989 Al-Surmi et al., 2019).

Considering Coastal Karnataka is a region with existence and mixture of urban and rural communities, regional disparities in digital reach and literacy may create hindrances to m-banking productivity [4]. Particularly in such transitional economies, studies by Mishra (2021) and Prakash and Sahu (2022) highlight the importance of localized awareness campaigns and customer support in improving the adoption of digital banking. The existence of cooperative banks and regional rural banks along with nationalized and private banks also increase complexity in the mobile banking ecosystem here (Narayan & Upadhyaya, 2020).

This study discusses about the adoption and usage patterns of mobile banking by bank customers in Coastal Karnataka. It aims to analyse the factors influencing adoption, provide an evaluation of the satisfaction achieved with extant services and identify impediments to sustained use. This study helps in analysing these dimensions and make a larger contribution to the financial inclusion discourse in semi-urban and rural India which is useful for the policy makers, financial institutions and technology providers.

Objectives of the Study:

1. To assess the current adoption rate of mobile banking apps among bank customers in coastal Karnataka
2. To identify the key factors influencing the adoption and continued usage of mobile banking apps in the region.
3. To evaluate customer satisfaction levels and perceived benefits of mobile banking apps among users in the study area.
4. To examine the barriers and challenges faced by bank customers in adopting and using mobile banking apps in coastal Karnataka

Research Methodology

Research Design

This study adopted a descriptive research design to explore the adoption and usage patterns of mobile banking applications among bank customers in Coastal Karnataka. A descriptive design was chosen for its ability to provide an in-depth understanding of current behaviors, attitudes, and trends related to mobile

banking usage. It also allows for efficient data collection and analysis from a relatively large sample, making it both cost-effective and time-efficient.

Study Area

The research was conducted in Coastal Karnataka, a region comprising districts such as Dakshina Kannada, Udupi, and Uttara Kannada. This area was selected due to its high literacy rate, widespread use of mobile banking applications, significant mobile phone penetration, and a strong digital banking culture. Additionally, Coastal Karnataka is historically known as the cradle of the Indian banking sector, making it a relevant and strategic location for this study.

Target Population

The population for this study consisted of individuals aged 18 years and above who:

- Were account holders with any recognized financial institution.
- Regularly used mobile banking services via smartphones or tablets.

These criteria ensured that the respondents had direct experience with mobile banking platforms, which is essential for generating meaningful insights.

Sample Size and Sampling Technique

A total of 100 respondents were included in the study. The purposive sampling technique was employed to select participants who met the following criteria:

- Must be a bank account holder.
- Must be a regular user of mobile banking apps.

To locate eligible participants, the snowball sampling method was used, where initial respondents referred other potential participants who met the inclusion criteria. This approach was particularly useful in reaching a targeted audience efficiently.

Analysis of Data

Table 1 Age of the respondents

Age Group	No of Respondents	Percentage
18-25	68	68.00
26-35	8	8.00
36-45	12	12.00
46-55	8	8.00
56 and above	4	4.00
Total	100	100

Table 1 shows the age composition of the respondents of the study. Out of a total of 100 participants, the majority belong to the younger age group, with 68% (68 respondents) falling between the ages of 18 and 25. This indicates a strong representation of young adults, who are typically more tech-savvy and open to adopting digital solutions such as mobile banking. The remaining respondents are distributed across older age groups, with 8% (8 respondents) aged 26-35, 12% (12 respondents) aged 36-45, 8% (8 respondents) aged 46-55, and only 4% (4 respondents) aged 56 and above. This distribution suggests that younger

individuals dominate mobile banking adoption in this study, while older age groups are significantly less represented, possibly due to lower familiarity or comfort with technology-driven financial services.

Table 2 Gender of the Respondents

Gender	No of Respondents	Out of 100
Male	32	32.00
Female	68	68.00
Total	100	100

Table 2 shows the gender distribution of the respondents. In terms of gender distribution, females form a majority of the respondents at 68% (68 respondents), compared to 32% (32 respondents) who are male.

Table 3. Education Level of the respondents

Education level	Response	Percentage
High School or below	6	6.00
PUC	8	8.00
Undergraduate Degree	66	66.00
Post Graduate Degree	20	20.00
Total	100	100

Table 3 shows the education level of respondents. The data shows that majority of participants possess a relatively high level of education. Specifically, 66% of the respondents hold an undergraduate degree, indicating a strong presence of individuals with higher education. Additionally, 20% of respondents have a postgraduate degree. In comparison, only a small proportion of respondents have education levels at or below high school (6%) or PUC (8%).

Table 4 Occupation of the Respondents

Occupation	Response	Percentage
Student	64	64.00
Private Sector Employee	16	16.00
Government Employee	2	2.00
Self-Employed	4	4.00
Retired	2	2.00
Homemaker	12	12.00
Total	100	100

The data in table 4 on the occupation of respondents shows that a majority of the respondents, accounting for 64%, are students, indicating a significant representation of this group in the study. Private sector employees make up the second-largest category with 16% of the responses, reflecting a moderate presence of working professionals in the sample. Homemakers constitute 12% of the respondents. On the other hand, government employees and self-employed individuals form smaller proportions, each contributing 4% and 2%, respectively. Retired individuals also account for a minimal share at 2%.

Table 5. Area of residency of the respondents

Residency	Response	Percentage
Urban	74	74.00
Semi-Urban	20	20.00
Rural	6	6.00
Total	100	100

Table 5 shows the data on the area of residency of the respondents reveals that a majority of the respondents reside in urban areas. Out of the 100 respondents, 74% (74 individuals) are from urban regions, indicating a strong representation from cities or highly developed areas. Meanwhile, 20% (20 individuals) of the respondents come from semi-urban areas, suggesting a moderate presence from towns or developing regions. Only 6% (6 individuals) of the respondents belong to rural areas, highlighting the limited participation from less-developed or remote locations.

Table 6 Frequency of using Mobile Banking apps

Usage Frequency	Response	Percentage
Daily	50	50.00
Weekly	26	26.00
Monthly	10	10.00
Rarely	10	10.00
Never	4	4.00
Total	100	100

Table 6 shows how frequently the respondents were using mobile banking applications. A considerable portion of respondents (26%) indicated that they use mobile banking apps on a weekly basis. These users may rely on mobile banking for periodic transactions or account monitoring rather than daily interactions. This could suggest either a preference for conducting more complex transactions offline or a cautious approach toward digital banking tools. Nevertheless, the weekly usage pattern still demonstrates a positive inclination toward adopting mobile banking solutions, although less intensively than daily users.

Only 10% of the respondents reported using mobile banking apps on a monthly basis, while another 10% claimed to use them rarely. These lower frequencies might be attributed to various factors such as limited awareness, lack of trust in digital banking systems, or infrequent need for banking services. For instance, individuals who perform only a few transactions per month might not feel the need to engage with mobile banking regularly. Additionally, some users may prefer traditional methods like visiting physical branches or using ATMs due to personal preferences or technical limitations.

Finally, a small percentage (4%) of respondents stated that they have never used mobile banking apps. This group likely represents individuals who are either unfamiliar with the technology, uncomfortable with its use, or possibly do not own smartphones or access to stable internet connections. Addressing this

gap is crucial for banks aiming to promote financial inclusion and digitization across all segments of society.

The data reveals that mobile banking has gained substantial traction among customers in Coastal Karnataka, with over three-fourths of respondents (50% daily + 26% weekly) engaging with the platform at least once a week. However, there remains a segment of the population that uses mobile banking infrequently or not at all. To enhance adoption further, banks could focus on improving digital education, addressing security concerns, and ensuring that mobile banking interfaces are user-friendly for people of varying technological proficiency. Overall, the study highlights both the progress made in mobile banking adoption and the opportunities that exist for deeper penetration into less frequent or non-user groups.

Table 7 Frequently used mobile banking features

Mobile Banking Features	Response	Percentage
Checking Account Balance	18	18.00
Transferring Funds	34	34.00
Paying Bills	48	48.00
Mobile Check Deposit	0	0.00
Total	100	100

The data presented in Table 7 gives details of frequently used mobile banking services by the respondents. Among the various mobile banking features, bill payment is the most commonly used feature, with 48% of respondents indicating it as their preferred mobile banking service. This high percentage underscores the growing reliance on digital platforms for managing recurring financial obligations, such as utility bills, mobile recharges, and other regular payments. The convenience and time-saving benefits offered by mobile banking in this context are likely key drivers behind its popularity. Users find it more efficient to pay bills directly through their mobile banking apps rather than visiting physical locations or using traditional methods like cheques or cash.

Following closely behind is fund transfer, which accounts for 34% of responses. Transferring money electronically between accounts or to third parties has become an essential function of mobile banking, especially in a digitally evolving economy like India. This suggests that users have embraced the ease and immediacy of transferring funds without the need to visit a bank branch or use alternative platforms like net banking or over-the-counter services.

Checking account balance ranks third, with 18% of respondents selecting it as the feature they use most frequently. While this percentage is lower compared to the previous two functions, it still indicates that a significant portion of users rely on mobile banking for monitoring their financial status in real-time. This functionality contributes to greater financial awareness and control, allowing users to stay updated on their financial health without requiring direct interaction with banking personnel.

Interestingly, none of the respondents reported using the mobile check deposit feature. This is because the feature is not widely available or promoted by the banks also users are not aware of its existence. This gap

highlights an opportunity for banks to educate customers about the feature and streamline the process to encourage adoption.

The data reveals that mobile banking users in Coastal Karnataka predominantly utilize functionalities related to bill payments and fund transfers, while checking account balances remains moderately popular. On the other hand, the mobile check deposit feature remains entirely unused, suggesting a need for improvement or better customer education.

Table 8. Primary reason for using mobile banking apps

Primary Usage Reason	Response	Percentage
Convenience	54	54.00
Time-saving	12	12.00
24/7 access to banking services	20	20.00
Avoiding visits to physical bank branches	14	14.00
Total	100	100

The increasing penetration of smartphones and internet connectivity has revolutionized the way individuals interact with financial institutions, particularly through mobile banking apps. A recent study conducted among bank customers in Coastal Karnataka provides valuable insights into the primary reasons behind the adoption and usage of mobile banking applications. According to the data presented in Table 8, convenience emerges as the most significant factor driving the use of these apps, with 54% of respondents citing it as their main motivation. This highlights how mobile banking has simplified financial transactions, allowing users to manage their accounts anytime and anywhere, eliminating the need for physical presence at a bank branch.

Following convenience, 20% of respondents identified “24/7 access to banking services” as their primary reason for using mobile banking apps. This reflects the growing demand for uninterrupted financial services in today’s fast-paced environment. With round-the-clock access, users can perform essential tasks such as checking balances, transferring funds, paying bills, or even applying for loans without being restricted by traditional banking hours. This flexibility is particularly beneficial for individuals with busy schedules or those living in remote areas where physical bank branches may be limited.

Time-saving, another critical factor, was reported by 12% of the respondents. Mobile banking eliminates the need to wait in long queues or spend time traveling to a bank branch, thereby streamlining routine banking activities. The ability to complete transactions within minutes from a personal device significantly enhances user experience and efficiency, especially for younger, tech-savvy customers who prioritize speed and convenience.

Additionally, 14% of participants indicated that avoiding visits to physical bank branches was their main reason for adopting mobile banking. This aligns with broader global trends toward digital transformation and contactless interactions, particularly accelerated during the pandemic. Customers increasingly prefer minimizing in-person interactions not only for convenience but also for safety and comfort.

The study reveals that convenience, 24/7 accessibility, time efficiency, and reduced reliance on physical branches are key drivers behind the adoption of mobile banking apps in Coastal Karnataka. As digital banking continues to evolve, financial institutions must focus on enhancing user experiences, addressing security concerns, and promoting financial inclusion to ensure that all customer segments benefit from technological advancements.

Table 9. Level of comfort with the security measures in mobile banking apps

Security Measures	Response	Percentage
Comfortable	44	44.00
Neutral	52	52.00
Uncomfortable	4	4.00
Total	100	100

The adoption and usage of mobile banking have grown significantly over the past decade, driven by technological advancements and changing consumer preferences. However, one of the most critical factors influencing the acceptance of mobile banking remains security. The data presented in Table 9 provides understanding of how customers perceive the security measures within mobile banking apps.

According to the data, out of 100 respondents, 44% expressed that they are comfortable with the current security measures implemented in mobile banking applications. This suggests that nearly half of the user base feels confident in the safety protocols designed to protect their financial transactions and personal information. This level of comfort is a positive indicator, as it reflects trust in digital banking systems.

The findings also reveal that a significant portion of users 52%, responded with a neutral stance regarding their comfort with app security. This neutrality could stem from various factors. It could indicate a lack of awareness or understanding of the specific security features employed by these apps. Alternatively, it might suggest a cautious attitude among users who rely on mobile banking but remain uncertain about the effectiveness of safeguards against cyber threats such as phishing, malware, or unauthorized access.

Only a small percentage 4% of respondents reported feeling uncomfortable with the security measures in place. While this figure is relatively low, it highlights the concerns of a small group that may require additional reassurance or education to build confidence in mobile banking platforms.

The data underscores a generally positive perception of security among mobile banking users in Coastal Karnataka, with a slight majority either feeling comfortable or remaining neutral. To encourage greater acceptance there is a need to focus on increasing awareness about existing security features and addressing the concerns of those who feel uncertain or uneasy about mobile banking apps.

Table 10. Change in the level of usage of mobile banking apps in the past year

Usage	Response	Percentage
Increased Significantly	66	66.00

Remained the Same	32	32.00
Decreased Significantly	2	2.00
Total	100	100

The data presented in Table 10 provides understanding of how customers' usage of mobile banking applications has changed over the past year. The responses reveal a clear upward trend in the adoption and utilization of mobile banking apps, reflecting the growing reliance on digital financial services.

A significant majority of respondents, amounting to 66%, reported that their usage of mobile banking apps has increased significantly over the last year. This suggests that mobile banking is becoming an integral part of daily financial transactions for many users in this region. Several factors have contributed to this growth, including increased smartphone penetration, better internet connectivity, rising digital literacy, and the convenience offered by mobile banking platforms. Additionally, the push toward digital payments and online banking services by both governmental and private institutions may have played a role in encouraging more frequent use of these apps.

On the other hand, 32% of respondents stated that their level of mobile banking app usage has remained the same. These individuals are likely already habitual users who have integrated mobile banking into their routine but have not further increased their engagement with the technology. This group represents a stable user base that continues to rely on mobile banking without notable fluctuations in behavior.

Only 2% of respondents reported a significant decrease in their usage of mobile banking apps. While this percentage is minimal, it highlights the existence of a small segment of users who may face challenges related to digital access, security concerns, or dissatisfaction with service quality.

The data highlights a positive shift in mobile banking behavior among the majority of customers in Coastal Karnataka. The overwhelming increase in app usage indicates that mobile banking is not only gaining traction but also becoming a preferred mode of managing finances.

Table 11. Level of Satisfaction with the current mobile banking app experience

Customer Satisfaction	Response	Percentage
Satisfied	64	64.00
Neutral	32	32.00
Dissatisfied	4	4.00
Total	100	100

The data presented in Table 11 provides an insight into the level of customer satisfaction regarding the current mobile banking app experience among bank customers in Coastal Karnataka.

Out of the total respondents a significant majority of 64% expressed that they were satisfied with their mobile banking app experience. This indicates that the majority of users find the apps convenient, functional, and capable of meeting their banking needs effectively. Given the rapid digitization of financial

services in India, this positive feedback underscores the success of mobile banking platforms in catering to the demands of modern consumers, particularly in terms of ease of access, transaction speed, and service reliability.

On the other hand, 32% of the respondents remained neutral in their response. This represent users who have not formed a strong opinion about the app or those who face occasional challenges but are not significantly inconvenienced. These individuals use mobile banking sparingly or rely on alternative channels for most of their banking needs.

Only a small percentage of respondents, 4%, reported dissatisfaction with the mobile banking app. Although this figure is relatively low, it should not be overlooked. These dissatisfied users encountered issues such as technical glitches, poor user interface design, limited functionality, or inadequate customer support.

The data reflects a largely positive reception of mobile banking apps among customers in Coastal Karnataka, with over two-thirds expressing satisfaction. However, the notable presence of neutral respondents suggests room for improvement in enhancing user engagement and addressing latent issues. By focusing on refining user experience, ensuring seamless functionality, and providing better support systems, banks can further increase satisfaction levels and encourage greater adoption of mobile banking services in the region.

Table 12. Main barrier preventing customers from using mobile banking apps more frequently

Barriers	Response	Percentage
Lack of Trust in Digital Transactions	24	24.00
Limited features in the app	10	10.00
Poor user interface	18	18.00
Slow app performance	14	14.00
No Barriers, I use it frequently	34	34.00
Total	100	100

The adoption and usage of mobile banking apps have seen significant growth in recent years, driven by technological advancements and changing consumer preferences. Despite this progress, several barriers prevent customers from using these apps more frequently. The data presented in Table 12 provides insights into the primary challenges faced by users of mobile banking apps in this region.

From the data it is evident that a substantial portion of respondents 34% reported no barriers to frequent use of mobile banking apps, indicating a positive perception and high level of satisfaction with the technology among nearly one-third of the surveyed population. These respondents are mostly early adopters or individuals who are technologically savvy and comfortable with digital transactions.

However, for the remaining two-thirds of the respondents, various challenges hindered their frequent use of mobile banking apps. The most significant barrier was Lack of Trust in Digital Transactions, stated by 24% of the respondents. This highlights a critical issue related to user confidence in the security and

reliability of digital platforms. Many customers have concerns about the safety of their personal and financial information, fearing potential frauds, hacking, or unauthorized access. Addressing this concern requires targeted awareness campaigns, enhanced cybersecurity measures, and increased transparency from banks to build trust among users.

Another notable issue was "Poor User Interface," mentioned by 18% of the respondents. A poorly designed interface can make navigation difficult, leading to frustration and reduced engagement with the app.

Fourteen percent of the respondents mentioned Slow App Performance as a deterrent to frequent usage. Performance issues such as delayed transaction processing, long loading times, or frequent crashes can significantly impact user satisfaction. To mitigate this, banks should invest in optimizing their apps for speed and reliability, leveraging advanced technologies and robust infrastructure to ensure seamless performance.

Additionally, 10% of the respondents pointed out Limited Features in the App as a barrier. This suggests that some users felt that mobile banking apps do not offer the full range of services they expect, potentially limiting their utility compared to traditional banking methods.

While a significant proportion of bank customers in coastal Karnataka embrace mobile banking without hesitation, addressing the barriers highlighted in the study is essential to further drive adoption and usage. Building trust through improved security, enhancing user interfaces, optimizing app performance, and expanding features will play a pivotal role in overcoming these obstacles.

Table 13. How likely respondents would recommend mobile banking apps to friends and family

Recommendation Likelihood	Response	Percentage
Likely	60	60.00
Neutral	34	34.00
Unlikely	6	6.00
Total	100	100

The data presented in Table 13 provides insights into customer satisfaction and loyalty toward mobile banking applications. Specifically, the table outlines how likely respondents are to recommend mobile banking apps to their friends and family. This data is crucial as it reflects overall user experience, trust in the service, and potential word-of-mouth promotion, which plays a significant role in technology adoption. According to the data, a substantial majority of respondents 60% stated that they are “Likely” to recommend mobile banking apps to others. This suggests that more than half of the surveyed population has had a positive enough experience with these apps to endorse them to their personal network. High recommendation rates often correlate with high levels of usability, reliability, and perceived value—factors that are essential for digital banking platforms aiming to increase market penetration and customer retention.

On the other hand, 34% of respondents remained “Neutral” in their response. This group represent those individuals who use mobile banking out of necessity rather than preference or those who have mixed experiences with the service. They may not face major issues but also do not feel strongly enough to

advocate for the platform. The neutral sentiment stem from average performance, lack of awareness about features, or minimal emotional engagement with the app.

Only 6% of respondents were “Unlikely” to recommend mobile banking apps, indicating dissatisfaction among a small minority. While this percentage is relatively low, it still highlights areas where banks need to improve. These users faced technical glitches, security concerns, poor interface design, or inadequate customer support.

The data indicates a generally positive perception of mobile banking apps among customers in coastal Karnataka, with a clear majority willing to recommend them. However, there remains a significant portion of neutral users whose endorsement could be influenced by further enhancements in service quality and user engagement. While mobile banking platforms have largely succeeded in meeting customer expectations, continuous innovation and customer-centric improvements are necessary to fully harness the potential of digital banking in this region.

Table 14. The feature of mobile banking apps respondents finds most valuable

Features	Response	percentage
Checking account balances	26	26.00
Transferring Money between accounts	46	46.00
Paying bills	28	28.00
Mobile Check deposit	0	0
Budgeting and financial management tools	0	0
Total	100	100

Table 14 provides information about the features that users prioritize most when it comes to their mobile banking applications. The data highlights a clear preference for functionalities related to transactional ease and financial oversight, while other advanced features appear to have negligible importance in the eyes of the respondents.

One of the most important fact which can be understood from the data is that highest percentage of the respondent 46% of respondents identified Transferring Money between accounts as the most valuable feature among the mobile banking apps. This indicates that users primarily view mobile banking apps as tools for seamless and efficient fund transfers within their own account ecosystem. This preference highlights the importance of convenience and instant access to funds, which likely reflects the growing need for hassle-free digital transactions in daily financial activities.

Following this, 28% of respondents found Paying bills to be the most valuable feature, suggesting that bill payment functionality holds significant utility for a substantial portion of users. This aligns with the broader trend of digitizing everyday financial tasks, where users appreciate the ability to manage recurring expenses without visiting physical locations or using traditional methods.

Another 26% of respondents considered Checking account balances as the most important feature. This shows the value users place on real-time visibility into their financial status, enabling better personal

financial management. It also shows that users rely on mobile banking apps not only for executing transactions but also for monitoring their financial transactions regularly.

Interestingly, no respondents (0%) selected either Mobile Check deposit or Budgeting and financial management tools as the most valuable features. This suggests that these functionalities are either underutilized, not widely known among users, or perhaps not sufficiently integrated into the mobile banking experience offered by banks in the region.

The data shows that users in Coastal Karnataka predominantly prioritize core functionalities—especially those that facilitate quick transactions and provide insight into their financial standing. Features like transferring money between accounts, paying bills, and checking balances dominate user preferences, indicating that mobile banking apps are largely seen as platforms for immediate, practical use rather than comprehensive financial planning. To enhance user engagement and satisfaction, banks should focus on optimizing these essential features while simultaneously educating users about more advanced tools like budgeting and mobile check deposits, potentially increasing their adoption over time.

Table 15. How has using a mobile banking app has changed respondents banking habits

Banking Habit Changes	Response	Percentage
Reduced visits to Physical Bank branches	40	40.00
Increased awareness of spending habits	20	20.00
More frequent checking of account balances	12	12.00
Faster bill payments	22	22.00
No significant change	6	6.00
Total	100	100

The data presented in Table 15 provides valuable insights into the behavioral changes among respondents who use mobile banking apps. One of the most significant findings from the study is that 40% of respondents reported a reduction in visits to physical bank branches. This indicates that mobile banking apps are effectively serving as an alternative to traditional banking methods, reducing the need for in-person interactions. This shift not only saves time for customers but also reduces footfall at banks, allowing them to allocate resources more efficiently.

Another notable change is that 20% of respondents stated they have become more aware of their spending habits since using mobile banking apps. This suggests that features such as real-time transaction alerts, expense tracking tools, and easy access to account statements are helping users monitor and manage their finances better.

Additionally, 22% of respondents indicated that they now make faster bill payments due to the convenience offered by mobile banking apps. The ease of scheduling and executing payments through these platforms likely contributes to this perception. Faster bill payments can improve financial management for individuals and reduce late payment penalties, benefiting both consumers and service providers.

A smaller percentage of respondents 12% mentioned that they check their account balances more frequently since adopting mobile banking apps. This increased engagement with personal finances could enhance financial transparency and help users stay updated about their monetary status in real time.

Interestingly, a minor proportion of respondents 6% reported no significant change in their banking habits, indicating that either they continue to rely on traditional banking methods or that the mobile app has not significantly altered their behavior. This could be due to various factors, such as personal preferences, limited digital literacy, or lack of trust in technology-based banking solutions.

The data from the study highlights the transformative impact of mobile banking apps on customer behavior in Coastal Karnataka. The most prominent changes include reduced reliance on physical bank branches, improved awareness of spending patterns, faster bill payments, and more frequent monitoring of account balances. These shifts reflect a broader trend towards digitalization in the banking sector, offering greater convenience and efficiency for customers. However, the presence of a small segment of users experiencing no significant change underscores the importance of continued efforts to enhance user adoption and satisfaction with mobile banking platforms.

Table 16. Factor which would most likely cause respondents to switch to a different mobile banking app

App Switch Factors	Response	Percentage
Better User interface	20	20.00
More Features	20	20.00
Improved Security Measures	32	32.00
Faster Transaction Processing	20	20.00
Integration with other financial services	8	8.00
Total	100	100

The table 16 highlights five key factors—better user interface, more features, improved security measures, faster transaction processing, and integration with other financial services—and their respective influence on customers' decision to change apps.

One of the most prominent reasons cited for switching apps is improved security measures, which accounted for 32% of responses. This indicates that users place a high premium on the safety of their personal and financial information. In an era where cyber threats are increasingly sophisticated, ensuring robust encryption, two-factor authentication, and regular software updates can significantly enhance customer trust and loyalty toward a mobile banking platform.

20% each of the respondents stated that better user interface (UI), more features, and faster transaction processing would make them switch their mobile banking apps. These findings suggest that while functionality and performance remain crucial, the overall user experience plays a significant role in shaping customer preferences. A well-designed UI enhances usability, especially for less tech-savvy

individuals, thereby broadening the app's accessibility across diverse demographics. Similarly, offering additional features—such as bill splitting, investment tracking, or personalized budgeting tools—can add value and differentiate one app from another. Fast transaction processing also contributes to user satisfaction by minimizing wait times and improving operational efficiency.

The lowest percentage, at 8%, stated that would make them switch the mobile banking app. If there is a integration with other financial services. While this factor may not be a primary driver for most users, it still holds relevance for those who seek a unified financial ecosystem. Integration could include linking savings accounts, credit cards, insurance policies, or loan services within a single platform, providing users with a comprehensive view of their financial health. For digitally savvy customers, such seamless connectivity might become increasingly important in the future.

The data reveals that respondents are most sensitive to security concerns, followed by aspects related to user experience, functionality, and speed. To foster long-term customer retention and encourage adoption, banks should focus on strengthening digital security, refining app design, expanding feature sets, and optimizing transaction speeds. Although integration with broader financial services currently ranks lower, it presents an opportunity for innovation as users become more accustomed to managing multiple financial instruments through digital platforms.

Table 17. How the respondents learn to use the mobile banking app

Learning Method	Response	Percentage
Self-taught through trial and error	58	58.00
Bank's tutorial or guide	12	12.00
Help from friends or family	28	28.00
In-person demonstration at a bank branch	0	0.00
Online video tutorials	2	2.00
Total	100	100

The data presented in Table 17 shows how customers of a bank in Coastal Karnataka learned to use their mobile banking apps. The responses highlight the various learning methods adopted by users, shedding light on their preferences and the effectiveness of different modes of learning in the context of digital banking adoption.

The most striking observation from the table is that a significant majority of respondents 58% reported being self-taught through trial and error. This indicates a high level of personal initiative among users when it comes to mastering new technologies. It also suggests that mobile banking applications are largely intuitive and user-friendly, allowing individuals to navigate the platforms independently without formal training or assistance. This finding underscores the importance of designing digital interfaces that are accessible and easy to understand, as users often rely on exploration rather than structured guidance to learn how to use such services.

A notable portion of respondents 28% cited help from friends or family as their primary method of learning. This highlights the role of social networks and interpersonal relationships in facilitating technology adoption. Friends and family members often serve as trusted sources of support, especially for individuals who may feel less confident using digital tools on their own. This result emphasizes the value of informal education and peer influence in promoting financial technology usage, particularly in communities where traditional banking practices have been more prevalent.

Only 12% of respondents reported relying on tutorials or guides provided by the bank. While this percentage is relatively low, it reflects an opportunity for banks to improve the accessibility, visibility, and usability of their official resources. By investing in more engaging and comprehensive educational materials, banks can empower users with reliable information directly from the source, potentially reducing dependency on informal learning channels and minimizing errors.

Interestingly, none of the respondents indicated having learned through an in-person demonstration at a bank branch. This could imply that such opportunities are either not widely available, underutilized, or perhaps perceived as unnecessary given the ease of self-learning or reliance on informal support systems. Only 2% of respondents used online video tutorials to learn how to use the app. This small percentage indicate limited awareness of such resources or a preference for more personalized or hands-on approaches to learning. Given the growing popularity of video-based learning platforms like YouTube, banks could benefit from creating short, clear, and engaging video content to guide users through key functionalities of their mobile banking apps. Such efforts would align with broader trends in digital education and could appeal to a wider range of users.

The data shows that self-learning and social support play dominant roles in how customers in Coastal Karnataka acquire the skills needed to use mobile banking apps. While official learning resources provided by banks currently take a backseat, they represent a significant area for improvement and innovation. By enhancing the availability and quality of tutorials, guides, and video content, banks can better support their customers, foster greater confidence in digital banking, and promote wider adoption of mobile financial services.

Table 18. Biggest advantage of using a mobile banking app compared to traditional banking methods

Perceived Advantages	Response	Percentage
24/7 access to banking services	52	52.00
Reduced need for cash transactions	24	24.00
Better tracking of expenses	6	6.00
Faster problem resolution	12	12.00
Environmental benefits (paperless)	6	6.00
Total	100	100

The adoption and usage of mobile banking applications have witnessed a significant surge in recent years, driven by advancements in technology, increased smartphone penetration, and changing consumer

preferences. One critical aspect of understanding this shift lies in identifying the perceived advantages that customers associate with mobile banking compared to traditional banking methods. The data presented in Table 18 gives insights into these perceptions, highlighting key factors that influence customer preference and satisfaction.

According to the findings of the study, most frequently cited advantage of using mobile banking apps is the ability to access banking services 24/7. This response was given by 52% of the participants, making it the most prominent reason for preferring mobile banking. This finding underscores the importance of convenience and accessibility in today's fast-paced world, where individuals value the flexibility to manage their finances at any time without being restricted by traditional banking hours or physical branch locations. The round-the-clock availability of mobile banking services allows users to perform essential transactions such as checking balances, transferring funds, paying bills, and monitoring accounts whenever it suits them, which is particularly beneficial for those with busy schedules or limited mobility. The second most cited advantage is the reduced need for cash transactions, reported by 24% of respondents. This reflects a growing trend towards digital payments and financial inclusion initiatives aimed at promoting a cashless economy. Mobile banking apps enable users to conduct transactions electronically, reducing dependency on physical currency and minimizing the risks associated with carrying cash. Moreover, electronic transactions leave a digital trail, enhancing transparency and accountability in financial dealings.

A smaller percentage of respondents 6% identified better tracking of expenses as a major advantage of mobile banking apps. This feature is particularly relevant for users who want to maintain control over their personal finances. Most mobile banking applications come equipped with tools that allow users to categorize spending, set budgets, and receive alerts when they exceed predefined limits. These functionalities empower users to make informed financial decisions and cultivate healthier money management habits. Although only a minority of respondents highlighted this benefit, its potential long-term impact on financial literacy and planning should not be overlooked.

Faster problem resolution was another perceived advantage, cited by 12% of participants. Mobile banking apps often provide instant access to customer support through features such as live chat, grievance redressal portals, and real-time notifications about transaction statuses. These capabilities significantly reduce the time and effort required to resolve banking-related issues compared to visiting a physical branch or waiting for email responses. For customers seeking timely assistance, the immediacy offered by mobile apps enhances overall user experience and trust in digital banking platforms.

Lastly, environmental benefits such as going paperless were recognized by 6% of respondents as an advantage of mobile banking. This indicates a level of awareness among some users about the sustainability benefits of reducing paper usage. Mobile banking eliminates the need for paper cheques, printed statements, and other physical documentation, contributing to environmental conservation efforts. While this factor may not be the primary driver for most users, it does reflect a growing consciousness about responsible consumption and the role of technology in promoting eco-friendly practices.

The data shows that the perceived advantages of mobile banking apps are largely centered around convenience, security, and efficiency. The overwhelming preference for 24/7 access demonstrates how modern consumers prioritize flexibility and autonomy in managing their finances. Additionally, the reduction in cash transactions aligns with broader economic and technological shifts toward digitization. While features such as expense tracking, faster problem resolution, and environmental benefits appeal to

smaller segments of users, they collectively contribute to a more comprehensive and user-centric banking experience.

Table 19. Additional feature respondents like to see in their mobile banking app

Need for additional features	Response	Percentage
Personalized financial advice	44	44.00
Ability to apply for loans or credit cards	22	22.00
Integration with digital wallets	30	30.00
Voice-activated commands	4	4.00
Total	100	100

Table 19 shows the information about what users most desire in their mobile banking apps beyond basic functionalities. According to the data 44% of respondents expressed a strong preference for personalized financial advice, making it the most desired additional feature. This highlights a growing demand for tailored financial guidance that aligns with individual spending habits, savings goals, and investment needs. In an era where artificial intelligence and data analytics are increasingly sophisticated, customers expect their banking apps to offer more than just transactional capabilities—they want proactive tools that can help them manage their finances more effectively.

The second most preferred feature was the ability to apply for loans or credit cards, chosen by 30% of respondents. This indicates that customers value convenience and seamless access to financial products directly through their mobile banking platforms. Rather than visiting a physical branch or navigating through complex websites, users prefer a streamlined digital process for applying for credit facilities.

Interestingly, 22% of respondents selected integration with digital wallets as their preferred additional feature. This reflects the increasing popularity of digital wallet platforms such as Paytm, PhonePe, and Google Pay in India, especially in urban and semi-urban areas. Customers are looking for interoperability between their banking apps and digital wallets to facilitate faster transactions, better cashback offers, and consolidated financial management. Integrating wallet functionality within mobile banking apps can not only improve user engagement but also encourage greater usage of bank-linked payment methods instead of third-party standalone wallets.

Only 4% of respondents expressed interest in voice-activated commands, making it the least preferred among the listed features. While voice technology is gaining traction in various domains—such as smart home devices and virtual assistants—its relevance in mobile banking seems limited in this context. This could be due to concerns about security, accuracy, or simply a lack of awareness about the potential benefits of voice-enabled banking features.

The findings reveal that bank customers in Coastal Karnataka prioritize features that enhance personalization, convenience, and integration. Personalized financial advice and seamless access to credit products stand out as the most sought-after additions, reflecting a shift toward more intelligent and user-centric banking solutions. While integration with digital wallets remains relevant, voice-activated

commands currently have limited appeal. These findings underscore the importance of aligning mobile banking innovations with actual customer needs and behaviors.

Table 20. Rating of the ease of use of mobile banking app

Ease of Usage	Response	Percentage
Easy	54	54.00
Neutral	46	46.00
Difficult	0	0
Total	100	100

The data in Table 20 shows how users perceive the usability of mobile banking apps. According to the data, a substantial majority of respondents 54% rated the ease of use of mobile banking apps as Easy. This indicates that more than half of the participants found these apps intuitive, straightforward, and convenient for conducting their banking transactions. Such positive feedback is a strong indicator of user-friendliness and suggests that mobile banking platforms are effectively meeting the needs of a large portion of their customer base in terms of accessibility and interface design.

On the other hand, 46% of the respondents expressed a neutral stance on the ease of use. While this does not necessarily imply dissatisfaction, it highlights an area where improvements could be made. Respondents who feel neutral might find the app functional but not particularly intuitive or effortless. These users may require additional guidance or training to fully utilize the app's features or may not see a significant advantage over traditional banking methods. This group represents a critical segment for banks aiming to enhance digital engagement, as converting neutral users into satisfied ones can lead to increased loyalty and reduced reliance on physical banking channels.

Among the respondents none of the respondents found the mobile banking app difficult to use. This is a notable finding, as it implies that even the least tech-savvy users did not encounter major obstacles in accessing or operating the app. It also reflects positively on the efforts of financial institutions and app developers in designing inclusive platforms that cater to a diverse demographic, including individuals with varying levels of digital literacy.

The data from the study reveals a generally positive perception of mobile banking app usability among bank customers in Coastal Karnataka. With over half of the respondents finding the app easy to use and no one reporting difficulty, mobile banking appears to be a well-accepted and accessible service in the region. However, the considerable percentage of neutral responses underscores the need for continuous improvement in user experience, targeted education, and support to further boost adoption rates and ensure that all customers can benefit from the convenience of mobile banking. As digital transformation continues to reshape the financial landscape, understanding and addressing user needs will remain essential to fostering long-term engagement and trust in mobile banking solutions.

Table 21. The extent to which mobile banking app has improved the banking experience of the respondents

Experience Improvement	Response	Percentage
Significantly improved	74	74.00
No change	26	26.00
Significantly Worsened	0	0
Total	100	100

The data presented in Table 21 provides information regarding the impact of mobile banking apps on the overall banking experience of respondents. The responses highlight a clear positive perception among users, with a significant majority reporting an improvement in their banking experience due to the adoption of mobile banking applications.

According to the data 74% of respondents indicated that their banking experience was significantly improved by using mobile banking apps. This suggests that mobile banking has had a substantial and favorable impact on how customers interact with their banks. Features such as 24/7 access to financial services, ease of transaction, account monitoring, and reduced dependency on visiting physical branches likely contributed to this positive response.

On the other hand, 26% of respondents reported no change in their banking experience. While this is a minority compared to those who experienced significant improvements, it raises important considerations. It is possible that these individuals either do not use the app regularly, lack familiarity with its features. Additionally, factors such as poor internet connectivity, usability issues could also explain why some users did not perceive any enhancement in their experience.

Interestingly, no respondents reported that their banking experience was significantly worsened by the introduction of mobile banking apps. This absence of negative feedback is a strong indicator that mobile banking has not disrupted the overall banking experience for users in this coastal region.

The data shows a largely positive perception of mobile banking apps among bank customers in Coastal Karnataka. The majority of users feel that these digital tools have significantly enhanced their banking experience, pointing towards successful adoption and integration of mobile banking into everyday financial practices. However, the segment of respondents who perceived no change underscores the need for further investigation into barriers to adoption, such as digital literacy, technological access, and user interface design.

Table 22. Sense of security felt by the respondents when using your mobile banking app

Security	Response	Percentage
Secure	30	30.00
Neutral	66	66.00
Insecure	4	4.00

Total	100	100
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The data presented in Table 22 shows how users perceive their safety while using mobile banking apps. According to the data only 30% respondents expressed that they felt secure while using the mobile banking app. This relatively low percentage indicates a considerable level of concern or skepticism among users regarding the safety of their financial transactions and personal information. In contrast, as many as 66% of the respondents reported a neutral stance on the issue of security. This majority group neither strongly felt secure nor insecure, which suggests that there may be room for improvement in terms of user education, interface design, or transparency in data handling practices. Finally, a small minority of 4% admitted to feeling insecure when using the service, highlighting potential vulnerabilities or gaps in trust that need addressing.

The high proportion of respondents who chose neutral implies that while users are not outright rejecting the platform due to security concerns, their lack of confidence could act as a barrier to deeper engagement with the app. For instance, they might avoid conducting high-value transactions or refrain from fully utilizing the features offered by mobile banking services. This neutral sentiment also reflects an opportunity for banks to strengthen customer trust through targeted interventions such as improved cybersecurity measures, clearer communication about privacy policies, and enhanced support systems for users encountering issues.

The 4% of respondents who reported feeling insecure represent a segment that may have had negative experiences, heard about incidents such as data breaches or fraud, or simply lack understanding of how mobile banking platforms safeguard their data. Addressing their concerns will require a multi-pronged approach, including personalized guidance, robust grievance redressal mechanisms, and perhaps even awareness campaigns aimed at dispelling myths and educating users on best practices for securing their accounts.

Trust in digital platforms is often built incrementally, and consistent efforts towards enhancing encryption, authentication processes can contribute significantly to improving user confidence. The data shows that while the majority of bank customers in Coastal Karnataka do not feel overtly insecure about using mobile banking apps, their perception of security remains lukewarm. Only a small fraction of users express a clear sense of security, indicating a need for banks to focus on strengthening both the reality and perception of safety in mobile banking. By addressing the concerns of the insecure minority and proactively engaging the neutral majority, financial institutions can foster greater trust and encourage more widespread and confident usage of mobile banking services in the region.

Table 23. Respondents' opinion on how the mobile banking app has affected their time management

Time Management	Response	Percentage
Saves a lot of time	86	86.00
No effect on time	12	12.00
Significantly increases time spent on banking	2	2.00

Total	100	100
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The increasing popularity of mobile banking in recent years has transformed the way individuals interact with financial institutions. The data presented in Table 23 shows how mobile banking apps have influenced time management for users. A striking finding is that 86% of respondents reported that using the mobile banking app "saves a lot of time." This overwhelming majority underscores the perceived efficiency and convenience offered by mobile banking platforms. Traditionally, managing banking tasks required physical visits to branches, standing in queues, and dealing with paperwork—all of which consumed significant amounts of time. With the advent of mobile banking apps, users can now perform a wide range of transactions such as checking balances, transferring funds, paying bills, and recharging services from virtually anywhere at any time. As a result, this technological advancement appears to have substantially reduced the effort and time previously invested in banking activities. This newfound efficiency likely translates into greater productivity and improved work-life balance, as they are able to allocate saved time to other personal or professional pursuits.

On the other hand, 12% of respondents indicated that mobile banking had no noticeable effect on their time management. This neutral perspective might reflect varying usage patterns or differing expectations among users. It is possible that some individuals continue to rely heavily on traditional banking methods while using mobile apps only for specific tasks. Others may find themselves occasionally facing challenges such as technical glitches, limited digital literacy, or a preference for face-to-face interactions with bank personnel. In such cases, the potential time-saving benefits of mobile banking may not be fully realized, resulting in no significant change in their overall time spent on banking activities.

Finally, a mere 2% of respondents believed that mobile banking significantly increased the time they spent on banking tasks. While this percentage is minimal, it highlights the possibility that certain aspects of mobile banking might introduce inefficiencies for a small segment of users. Potential reasons could include unfamiliarity with technology, difficulties navigating the app, security concerns, or frequent updates and changes in the interface that require additional learning time. These challenges suggest that despite the widespread advantages of mobile banking, there remains a need for targeted support, user-friendly design improvements, and training initiatives to ensure that all customers benefit equally.

The data clearly indicates that the vast majority of respondents view mobile banking apps as a time-saving tool that enhances their ability to manage banking tasks efficiently. The convenience and accessibility provided by these apps have undeniably reshaped customer experiences, allowing them to reclaim valuable time for other purposes. However, the smaller proportions of respondents who perceive no change or an increase in time spent on banking emphasize the importance of addressing usability issues and providing adequate guidance for those less comfortable with digital banking. Overall, mobile banking apps have made a positive impact on time management for most users in Coastal Karnataka, reflecting their growing significance in modern banking practices.

Table 24. Respondents Opinion about the impact of the mobile banking app on their financial management

Impact on Finance management	Response	Percentage
Improved my financial management	52	52.00

No impact on my financial management	34	34.00
Hindered my financial management	14	14.00
Total	100	100

The data presented in Table 24 provides information about how mobile banking apps influence users' financial management. The responses collected from participants reveal a clear trend, with a majority indicating that these apps have had a positive effect on their ability to manage personal finances.

Out of the total respondents, 52% reported that mobile banking apps improved their financial management. This significant majority suggests that such apps are empowering users by providing them with tools and real-time access to their financial information. Features like account tracking, instant fund transfers, bill payments, and budgeting tools likely contribute to this perception. These functionalities enable users to stay updated on their financial status, make informed decisions, and streamline their monetary transactions.

On the other hand, 34% of respondents felt that mobile banking apps had no impact on their financial management. This group may represent users who either do not fully utilize the features available within these apps or view them merely as transactional tools rather than instruments for broader financial planning. It is also possible that some individuals in this category lack awareness of the advanced functionalities of mobile banking apps, or they might already have established financial habits that are not significantly influenced by digital tools.

A smaller percentage 14%, indicated that mobile banking apps hindered their financial management. This response warrants closer examination, as it highlights potential challenges or drawbacks associated with mobile banking adoption. Possible reasons could include issues like concerns about security and privacy, or even over-reliance on technology leading to impulsive spending or poor financial decisions. For instance, the ease of making transactions through mobile apps might encourage unplanned purchases or complicate personal budget adherence for some users. Additionally, those unfamiliar with digital platforms may find navigating mobile banking systems cumbersome, leading to frustration or mistrust.

The data reflects a largely positive perception of mobile banking apps' role in enhancing financial management among customers in Coastal Karnataka. However, the mixed responses also highlight the need for tailored strategies to address the concerns and needs of all user groups. Ultimately, mobile banking has the potential to serve as a powerful tool in promoting financial inclusion and literacy, provided its benefits are made accessible and comprehensible to all segments of the population.

Table 25. Respondent's opinion about the availability of information about mobile banking apps of their bank

Availability of Information	Response	Percentage
Excellent - all information is readily available	22	22.00
Good - most information is available, but some gaps exist	64	64.00

Average - basic information is available, but details are lacking	12	12.00
Poor - very little information is provided	2	2.00
Non-existent - no information is available	0	0
Total	100	100

The data presented in Table 25 shows the customers' perceptions regarding the availability of information about mobile banking apps offered by their banks.

A significant majority of respondents 64% rated the availability of information as Good, stating that most information is accessible but with some gaps. This suggests that while banks have made commendable efforts in providing essential details about their mobile banking applications, there remains room for improvement in ensuring comprehensive coverage of all necessary information. Users might encounter challenges when seeking specific or advanced features, which could impact their overall experience and trust in using these platforms.

Furthermore, 22% of respondents perceived the availability of information as Excellent, indicating that they had no trouble finding all the information they needed. This group likely represents highly satisfied users who feel confident navigating the bank's digital resources.

On the other hand, 12% of respondents found the information to be only Average, meaning that while basic instructions or overviews were available, more detailed guidance was missing. This could hinder users who wish to explore advanced functionalities or troubleshoot issues independently. Only 2% rated the availability of information as Poor, implying severe limitations in access to even moderately detailed content. No respondent reported that information was entirely Non-existent, highlighting the general commitment of banks to provide at least some level of transparency and support to their customers.

The data reveals that most bank customers in Coastal Karnataka perceive the availability of information about mobile banking apps positively, with a combined 86% rating it as either Excellent or Good. However, the presence of respondents who identified gaps in information signals an opportunity for banks to enhance user experience by improving the depth and accessibility of their informational resources. By addressing these shortcomings, banks can not only improve customer satisfaction but also encourage broader adoption and more effective use of mobile banking services in the region.

Table 26. Respondents' opinion about the process of setting up a mobile banking app

App Setup Experience	Response	Percentage
Very Easy	58	58.00
Neither easy nor difficult	42	42.00
Very difficult	0	0
Total	100	100

Table no 26 shows the respondents opinion about the process of setting up a mobile banking app. This data is crucial for understanding user perceptions and identifying potential areas for improvement. According to the data a significant majority of respondents Specifically, 58% found the setup process of mobile banking apps to be Very Easy. This indicates that banks and app developers have succeeded in creating a streamlined and user-friendly experience during the initial stages of mobile banking adoption. The ease of setup likely contributes to increased adoption rates, as users are more inclined to embrace technology that requires minimal effort to begin using. It also suggests that banks have effectively implemented clear instructions, straightforward verification processes, and possibly even customer support mechanisms to assist users during installation and configuration.

However, it is worth noting that 42% of respondents considered the setup process to be Neither easy nor difficult. While this group does not express dissatisfaction, their neutral stance highlights potential opportunities for further enhancement. These users might have encountered minor challenges during the setup process, such as confusion over document requirements, delays in verification, or unfamiliarity with certain steps. This feedback underscores the importance of continuous improvements in the user interface and experience design, as well as the need for targeted education initiatives to address knowledge gaps among specific demographics.

Importantly no respondents found the setup process to be Very Difficult, which serves as a positive indicator of the overall accessibility of mobile banking services in the region. This finding reinforces the idea that mobile banking has become increasingly user-centric, catering to individuals with varying levels of technological proficiency.

The data demonstrates that the majority of respondents perceive the setup of mobile banking apps as a seamless and hassle-free experience, contributing positively to overall adoption trends. However, the nearly equal proportion of users who remained neutral suggests that there is room for further optimization. To ensure broader acceptance and inclusivity, banks should focus on refining the setup process by incorporating enhanced guidance features, multilingual support, and improved troubleshooting mechanisms.

Table 27. Respondents' opinion on the biggest challenge when using mobile banking apps

Challenges	Response	Percentage
Navigating the app interface	14	14.00
Understanding technical terms and jargon	30	30.00
Completing transactions accurately	14	14.00
Resolving issues or errors	26	26.00
Remembering login credentials	16	16.00
Total	100	100

The users of mobile banking apps still face several challenges when navigating mobile banking applications. The data from table 27 reveals insights into challenges faced by customers. One of the most

significant challenges reported by respondents is understanding technical terms and jargon, with 30% of participants identifying it as their primary difficulty. This indicates a knowledge gap between the services offered and the users' comprehension levels. Technical language often used in mobile banking apps such as terms like "RTGS," "NEFT," or "MMID" can be intimidating for less tech-savvy individuals, especially those who may not have formal education in finance or technology. This barrier highlights the need for simplified language, better explanations, and possibly multilingual support within the app interface to cater to a diverse user base.

Following closely behind, 26% of respondents cited resolving issues or errors during transactions as a major challenge. This suggests that while users might initiate transactions without much trouble, unexpected errors such as failed transactions, timeouts, or connectivity issues create frustration and uncertainty. The lack of immediate support or clear guidance within the app aggravates these problems, potentially leading to distrust in the platform.

Remembering login credentials was identified as a challenge by 16% of respondents. This issue underscores the broader problem of digital literacy and password management among users. Many customers struggle with multiple accounts and passwords, which can lead to account lockouts and reduced usage. Banks could consider implementing biometric authentication methods such as fingerprint or facial recognition to ease access and reduce dependency on traditional passwords.

Navigating the app interface and completing transactions accurately were each reported by 14% of respondents. These findings suggest that usability remains a concern for a notable portion of users. While mobile banking apps are designed to streamline financial tasks, complex layouts, unclear navigation paths, and non-intuitive design can hinder effective use. Redesigning interfaces with a focus on simplicity, clarity, and logical flow could significantly improve user satisfaction and reduce transactional errors.

The data from the study highlights key areas where improvements can be made to enhance the mobile banking experience for customers in coastal Karnataka. Addressing issues related to technical jargon, error resolution, login difficulties, and interface design will not only boost user confidence but also promote greater adoption of mobile banking services. As digital banking continues to evolve, prioritizing user-centered design and comprehensive customer support will be crucial in bridging the gap between technology and accessibility.

Table 28. Respondents' opinion about the type of support they would find most helpful in adopting mobile banking

Support	Response	Percentage
In-person training sessions at bank branches	22	22.00
Video tutorials	16	16.00
Detailed user manuals	14	14.00
24/7 customer support hotline	36	36.00
Peer-to-peer learning programs	12	12.00
Total	100	100

The data presented in Table 28 provides details about the types of support that respondents believe would be most helpful in adopting mobile banking.

From the data, it is evident that a 24/7 customer support hotline is the most preferred form of assistance, with 36% of respondents identifying it as the support mechanism they would find most helpful. This underscores the importance of real-time assistance in addressing users' concerns and challenges promptly. A round-the-clock helpline not only enhances accessibility but also builds confidence among users, especially those who are less tech-savvy or new to digital banking platforms. It suggests that banks should prioritize investing in robust customer service infrastructure to ensure seamless adoption and continued usage of mobile banking services.

In-person training sessions at bank branches ranked second in popularity, with 22% of respondents expressing a preference for this method. This indicates that a significant portion of the population still values face-to-face interaction and hands-on learning when introduced to new technologies. In-person sessions allow for immediate clarification of doubts and provide a more personalized learning experience, which may be particularly beneficial for older customers or those unfamiliar with smartphones and apps. Video tutorials were the third most preferred option, garnering 16% of the responses. This mode of support leverages visual and auditory learning, enabling users to follow step-by-step instructions at their own pace. With the growing penetration of smartphones and internet access, video-based learning can be an effective tool for educating users about mobile banking features and troubleshooting common issues.

Detailed user manuals followed closely with 14% of the respondents favoring them. Although this percentage is lower than the previous categories, it still represents a notable segment of users who prefer reading and referring to written instructions. User manuals should therefore remain part of the support ecosystem, especially for complex transactions or security-related procedures.

Peer-to-peer learning programs received the least preference, with only 12% of respondents selecting this option. While this figure is relatively low, it should not be entirely overlooked. Peer learning can foster a sense of community and encourage knowledge sharing among users, particularly among younger, tech-savvy individuals.

The data reveals a clear hierarchy of support preferences among bank customers in Coastal Karnataka. Real-time assistance through a 24/7 customer support hotline emerges as the most critical need, followed by in-person training and video tutorials. These findings suggest that a multi-channel approach combining human support, visual learning, and personalized guidance will be most effective in driving mobile banking adoption.

Table 29. Effect of the language used in mobile banking apps on respondents' usage experience

App Terminology	Response	Percentage
No effect - I'm comfortable with the language used	70	70.00
Slight difficulty - I understand most terms but struggle with some	18	18.00
Moderate difficulty - I often need to lookup terms or ask for help	10	10.00

Significant difficulty - The language is a major barrier to my usage	2	2.00
Unable to use - The language makes the app completely inaccessible to me	0	0
Total	100	100

The data presented in Table 29 shows how the language used in mobile banking apps affects users' experience. This aspect is crucial to understanding the broader dynamics of digital banking adoption, particularly in the Indian context where there is widespread linguistic diversity.

The findings reveal that a majority of respondents 70% feel comfortable with the language used in these apps, indicating that the terminology does not hinder their usage. This suggests that for most users, the language employed in mobile banking apps is clear, intuitive, and effectively designed to cater to their needs. This comfort level likely contributes positively to their overall user experience and encourages continued engagement with mobile banking services.

However, the responses also highlight areas of concern because 18% of the respondents reported experiencing slight difficulty while using the apps. These users generally understand most terms but occasionally struggle with certain aspects of the terminology. This indicates that while the language may be broadly accessible, there are still elements that could be confusing or unclear to a small number of users. Such issues could potentially slow down transactions or create hesitation among users who are less familiar with technical or financial jargon.

The data shows that 10% of respondents faced moderate difficulty in understanding app terminology. These individuals often need to look up terms or seek assistance, which can lead to frustration and a less seamless banking experience. For this group, the language barrier appears to be a recurring issue that impacts their ability to independently navigate and utilize mobile banking services. This challenge highlights the need for more localized or simplified language options, better on-screen explanations, or contextual help features within the apps.

The study also found that 2% of the respondents faced significant difficulty due to the language used, considering it a major barrier to their usage of mobile banking apps. While this percentage is relatively small, it represents a critical segment of users who are significantly disadvantaged by the current language design of these platforms. These individuals may belong to demographics with limited exposure to technology, or a preference for regional dialects not adequately represented in the apps.

There were no respondents who reported being completely unable to use the apps due to language barriers, which is a positive indication that even those facing challenges are able to access some level of functionality, albeit with difficulty.

The data highlights the importance of language accessibility in enhancing the usability of mobile banking applications. While the majority of users in Coastal Karnataka find the language acceptable and easy to understand, a notable minority experiences varying degrees of difficulty. To ensure inclusive digital banking adoption, financial institutions should consider implementing multilingual support, improving user education through tutorials or glossaries, and simplifying complex terminologies. By addressing these concerns, mobile banking platforms can become more user-friendly and accessible to a wider audience.

Table 30. Respondents' opinion on mobile banking apps features they find most challenging to use

Challenging Features	Response	Percentage
Fund Transfers	14	14.00
Bill Payments	8	8.00
Account balance inquiries	10	10.00
Setting up new payees or beneficiaries	30	30.00
Applying for loans or other banking products	38	38.00
Total	100	100

Table 30 shows how certain features within the apps present challenges for users. The data reveals a clear hierarchy of difficulty, shedding light on areas that may require improvement to enhance user experience. Among the features examined, applying for loans or other banking products emerges as the most challenging aspect, with 38% of respondents indicating difficulties. This is a significant finding, as it suggests that despite the growing trend of digital lending and online product offerings, many users still struggle with navigating the application process through mobile platforms. This could stem from complex interfaces, lack of guidance during the application process, or insufficient understanding of the requirements for availing such services. Addressing this issue would not only improve customer satisfaction but also encourage greater engagement with a broader range of banking services offered via mobile apps.

A closely related challenge involves setting up new payees or beneficiaries, which 30% of respondents found difficult. This feature is essential for facilitating fund transfers to new recipients, and its perceived complexity might hinder users from fully utilizing the app's capabilities. Potential reasons include cumbersome verification processes, unclear instructions, or technical glitches during setup. Simplifying this process—through clearer prompts, streamlined verification methods, or enhanced support—could significantly reduce user frustration and increase transactional efficiency.

Account balance inquiries 10%, bill payments 8%, and fund transfers 14% were reported as less problematic by comparison. These functions are typically considered basic yet critical components of mobile banking, and their relatively low difficulty ratings suggest that users find them intuitive and easy to navigate. The high usability of these features indicates that mobile banking apps have successfully addressed core functionalities, laying a solid foundation for everyday transactions.

Nevertheless, even these seemingly straightforward tasks can benefit from continuous refinement. For instance, while fund transfers are generally well-designed, the 14% of users who found this feature challenging. Similarly, bill payment systems, though largely user-friendly, could be improved by incorporating reminders, auto-fill options, or better categorization of service providers to further simplify the process.

The data underscores a disparity in the ease of use across different mobile banking features. While fundamental operations like checking balances, making fund transfers, and paying bills are largely accessible, more advanced functionalities—particularly loan applications and adding new payees—pose

notable challenges. To bridge this gap, banks and app developers must prioritize user-centric design principles, including intuitive interfaces, contextual help resources, and personalized guidance. By addressing these pain points, financial institutions can foster greater trust, encourage deeper engagement, and ultimately drive wider adoption of mobile banking solutions among customers in Coastal Karnataka and beyond.

Major Findings of the Study

The study on mobile banking adoption and usage patterns among bank customers in Coastal Karnataka provides a comprehensive understanding of how digital banking is transforming financial interactions in the region. The study reveals several key insights into user behavior, preferences, challenges, and perceptions regarding mobile banking apps. These findings not only highlight the current state of mobile banking adoption but also offer actionable recommendations for banks aiming to enhance customer experience and drive further digital engagement.

Demographic Profile and Digital Readiness

The demographic composition of the respondents indicates a strong representation of younger individuals, with 68% falling between the ages of 18 and 25. This aligns with the global trend where younger populations are more inclined toward technology-driven services. Additionally, 74% of respondents reside in urban areas, reflecting higher digital penetration in developed regions compared to semi-urban 20% and rural 6% locations. The majority of respondents 64% are students, followed by private sector employees 16%, suggesting that mobile banking is particularly popular among digitally literate and tech-savvy segments of the population. Furthermore, 70% of respondents reported being "Very Comfortable" using smartphones and mobile apps, reinforcing the foundation for widespread mobile banking adoption in the region.

Usage Frequency and Core Features

A significant portion of users engage with mobile banking apps frequently, with 50% using them daily and 26% weekly. This high frequency underscores the convenience and necessity of mobile banking in everyday financial management. Among the various features, bill payment 40% and fund transfers 34% emerged as the most commonly used functions, indicating that users primarily rely on mobile apps for transactional activities rather than advanced functionalities like mobile check deposit, which was unused by all respondents. Interestingly, while checking account balances remains moderately popular 18%, it highlights the role of mobile banking in promoting real-time financial awareness.

User Satisfaction and Perceived Benefits

The overall satisfaction level with mobile banking apps is largely positive, with 64% of respondents expressing satisfaction and 74% stating that their banking experience has significantly improved since adopting these platforms. Key advantages cited include 24/7 access to banking services 52%, time savings 86%, and reduced reliance on cash transactions 24%. Moreover, 66% of respondents reported an increase in mobile banking usage over the past year, signalling growing trust and integration of digital banking into daily life.

Challenges and Barriers to Adoption

Despite the positive trends, several challenges persist. Security concerns remain a critical barrier, with 24% of respondents citing a lack of trust in digital transactions as the primary reason for limited usage. Additionally, 18% identified poor user interface design as a deterrent, emphasizing the need for intuitive navigation and enhanced user experience. Other notable issues include slow app performance 14% and limited feature availability 10%. While only 4% of respondents expressed dissatisfaction, addressing their concerns around security, usability, and functionality is essential for inclusive adoption.

Security Perception and Trust Issues

When asked about their comfort with security measures, 44% of respondents felt secure, while 52% remained neutral. This suggests that while users are not overtly uncomfortable, there is a general sense of caution and skepticism surrounding digital banking security. Only 4% of respondents reported feeling insecure, but this minority highlights the importance of continuous improvements in cybersecurity protocols, transparency, and user education to build long-term trust.

Preferred Support Mechanisms and Language Accessibility

To facilitate smoother adoption, respondents identified the need for robust support systems. A 24/7 customer support hotline 36% and in-person training sessions at bank branches 22% were the most preferred forms of assistance. Video tutorials 16% and detailed user manuals 14% were also valued, highlighting the importance of multi-channel learning resources tailored to different user preferences. Regarding language accessibility, 70% of respondents found the terminology easy to understand, while 18% experienced slight difficulty and 10% moderate difficulty. This underscores the need for localized content, multilingual interfaces, and contextual help features to cater to diverse linguistic backgrounds.

Future Expectations and Feature Preferences

Looking ahead, users expressed interest in additional features such as personalized financial advice 44% and integration with digital wallets 30%. The ability to apply for loans or credit cards directly through mobile apps (22%) also ranked high, indicating a demand for expanded digital banking capabilities beyond basic transactions. These findings suggest that future enhancements should focus on personalization, integration, and advanced financial planning tools to meet evolving customer expectations.

Conclusion

In conclusion, the study reveals that mobile banking has gained substantial traction among customers in Coastal Karnataka, driven by its convenience, efficiency, and round-the-clock accessibility. The younger, tech-savvy demographic dominates adoption, with urban residents and students forming the core user base. While users appreciate the ease of use, time-saving benefits, and seamless transaction capabilities, challenges related to security, user interface design, and technical jargon persist. Addressing these barriers through enhanced cybersecurity, simplified language, and improved support mechanisms will be crucial in expanding adoption across all age groups and geographic regions.

Banks and financial institutions must prioritize user-centric design, invest in robust customer support, and leverage technology to provide personalized financial solutions. By fostering greater trust, improving digital literacy, and continuously refining the mobile banking experience, stakeholders can ensure broader financial inclusion and sustainable growth in the digital banking landscape of Coastal Karnataka. As

mobile banking continues to evolve, it holds immense potential to redefine how individuals manage their finances, offering a more inclusive, efficient, and secure banking ecosystem for all.

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