



FACTORS AFFECTING CUSTOMER'S ADOPTION OF MOBILE BANKING SERVICES IN TELANGANA STATE

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Abstract

The study examines the factors influencing customer adoption of mobile banking services in Telangana State, a region where digital banking is rapidly transforming the financial landscape. Mobile banking has emerged as a critical component of financial inclusion strategies by offering convenience, speed, and accessibility to customers, particularly in rural and semi-urban areas. Unlike traditional banking, which requires physical visits and is often constrained by time and location, mobile banking provides customers with a flexible, anytime-anywhere banking experience.

Primary data was collected to identify and analyze the determinants that encourage or hinder the utilization of mobile banking services. The findings reveal that convenience-related factors are the most significant drivers of adoption. Customers prefer mobile banking to save time, avoid long queues, and overcome the inconvenience of bank branch locations. Faster processing of transactions, such as cheque clearance and loan repayment updates, further motivates customers to shift from conventional banking practices. Additionally, features like real-time account updates and round-the-clock service accessibility enhance customer satisfaction and strengthen the preference for mobile banking.

In contrast, interpersonal aspects such as staff reluctance to assist or lack of personalized service were found to have minimal influence on adoption decisions. These insights suggest that customers prioritize efficiency, speed, and ease of use over traditional face-to-face interactions. The study concludes that banks should focus on improving user-friendly mobile platforms, ensuring secure transactions, and promoting financial literacy to boost adoption. The findings provide valuable implications for financial institutions and policymakers to accelerate digital transformation in banking.

Key words: *Factors, Mobile Banking, Financial Literacy.*

1. Introduction

The rapid advancement of information and communication technology (ICT) has revolutionized the banking sector worldwide, giving rise to innovative channels for delivering financial services. Among these, mobile banking has emerged as a transformative solution, enabling customers to perform banking transactions conveniently through smartphones and mobile applications. Mobile banking provides a range of services, including fund transfers, bill payments, balance inquiries, loan applications, and access to other financial products without the need to visit a physical bank branch. This development is particularly significant in developing countries like India, where financial inclusion remains a critical policy objective.

In India, the adoption of mobile banking has grown substantially over the past decade, supported by initiatives such as the Digital India program, improved internet penetration, and the increased affordability of smartphones. According to the Reserve Bank of India (RBI), mobile banking



transactions have recorded exponential growth in both volume and value, reflecting a shift in consumer behavior from traditional banking to digital channels. However, despite this progress, adoption rates vary significantly across regions, especially in rural and semi-urban areas where socio-economic disparities, digital literacy gaps, and infrastructural constraints persist.

Telangana, a rapidly developing state in southern India, presents an interesting case for analyzing mobile banking adoption. With a significant portion of its population residing in rural areas, the state faces challenges in extending formal financial services through conventional methods. Mobile banking has the potential to bridge this gap by offering convenient, cost-effective, and real-time banking solutions. Nevertheless, the successful implementation of mobile banking depends on multiple factors, including customer awareness, perceived ease of use, trust in technology, and the availability of supporting infrastructure.

Understanding these factors is crucial for financial institutions aiming to enhance mobile banking penetration and for policymakers seeking to promote inclusive financial systems. This study focuses on identifying the determinants that influence customers in Telangana to adopt mobile banking services. It examines aspects such as convenience, accessibility, security concerns, service quality, and technological readiness. By analyzing these dimensions, the research aims to provide insights that can guide banks in improving their mobile platforms, developing user-friendly interfaces, and designing awareness campaigns tailored to the needs of diverse customer groups.

The findings of this study are expected to contribute to the growing body of literature on digital banking adoption and offer practical recommendations for enhancing customer engagement with mobile banking services. In an era where digital transformation is reshaping financial landscapes, understanding customer behavior toward mobile banking remains a critical step toward achieving sustainable financial inclusion.

2. Review of Literature

The following section presents few reviews

Arijit, Kumar & Dabral (2023) The study explores the role of regional rural banks in promoting economic growth through mobile banking in rural India, especially Telangana. It finds that mobile banking improves fund transfers, balance tracking, and credit access. The authors stress financial literacy, reliable internet, smartphones, localized language support, and awareness campaigns as key enablers. Collaboration between government and fintech is recommended to bridge the digital divide.

Mohan, Reddy & Suma (2024) This research examines awareness and usage of mobile banking among rural women in Warangal. Despite availability, adoption is low due to digital illiteracy and trust issues. The authors suggest digital literacy programs via self-help groups, user-friendly interfaces, localized language, and bank-NGO awareness drives to enhance confidence.

Lakshmi & Prasad (2024) The study identifies technological barriers in Nalgonda district, including poor app performance and lack of vernacular support. It recommends improving app usability, multilingual features, and financial literacy efforts to promote inclusion.

Srinivas & Jayanthi (2024) Research in Mahbubnagar shows younger and educated individuals adopt mobile banking more, while older and less-educated people avoid it due to fraud fears. The study suggests awareness programs, digital literacy, and secure, easy-to-use apps to boost adoption.



Kavitha, Ramesh & Anil (2024) This paper assesses behavioral changes in Karimnagar after mobile banking adoption. It notes increased savings habits and transparency but highlights data privacy concerns. Recommendations include financial literacy and improved security features.

Ravi, Naresh & Sumanth (2024) The study in Adilabad links mobile banking use to socio-economic factors, with middle-aged men leading adoption. Women and elderly hesitate due to security worries and low digital skills. The authors propose community-based training and awareness campaigns.

3. Objective

- To analyse the factors influencing the users of mobile banking

4. Research Methodology

The study is descriptive in nature and aims to identify factors influencing customer adoption of mobile banking services in Telangana State. Primary data was collected from 390 respondents using a structured questionnaire based on a five-point Likert scale. A convenient sampling method was employed to select respondents from rural and semi-urban areas. Secondary data was obtained from journals, reports, and official publications. Statistical tools such as percentage analysis and descriptive statistics (mean and standard deviation) were used to interpret the data.

5. Analysis and Interpretation

The data collected from respondents was systematically analyzed to identify key factors influencing mobile banking adoption in Telangana. Percentage analysis and descriptive statistics such as mean and standard deviation were applied to interpret the responses. Likert scale ratings helped in understanding the intensity of customer opinions on convenience, accessibility, and reliability of mobile banking. The results indicate that time-saving, ease of access, and faster transaction processing are the most significant determinants. These insights form the basis for drawing conclusions and suggesting strategies to enhance mobile banking usage.

Table: 1, Likert Scale Responses on Determinants Influencing the Use of Mobile Banking Services

Reframed Items	Very Low	Low	Moderate	High	Very High
Visiting a bank branch consumes too much of my time	5 (1.3%)	17 (4.4%)	57 (14.6%)	89 (22.8%)	222 (57.0%)
Bank branches are located in inconvenient places for me	2 (0.5%)	6 (1.5%)	115 (29.5%)	119 (30.5%)	148 (38.0%)
When I travel to a new city, finding my bank branch is difficult	36 (9.2%)	79 (20.3%)	94 (24.0%)	80 (20.5%)	101 (26.0%)
Long waiting time in bank queues is common	12 (3.1%)	52 (13.3%)	140 (35.9%)	68 (17.4%)	118 (30.3%)
Overall service quality at my bank is unsatisfactory	42 (10.8%)	79 (20.3%)	110 (28.2%)	82 (21.0%)	77 (19.7%)
I often notice errors in my banking transactions	35 (8.9%)	78 (19.9%)	66 (16.9%)	78 (20.0%)	133 (34.3%)
I am required to visit multiple counters to complete a single transaction	66 (16.9%)	45 (11.5%)	87 (22.3%)	72 (18.5%)	120 (30.8%)



Bank staff members are reluctant to assist customers	62 (15.9%)	109 (28.0%)	87 (22.3%)	75 (19.2%)	57 (14.6%)
Bank employees lack adequate knowledge to resolve my queries	64 (16.4%)	52 (13.3%)	89 (22.8%)	74 (19.0%)	111 (28.5%)
Personalized attention from bank employees is missing	43 (11.0%)	109 (28.0%)	89 (22.8%)	76 (19.5%)	73 (18.7%)
I cannot access banking services anytime, any day	23 (5.9%)	62 (15.9%)	141 (36.2%)	107 (27.4%)	57 (14.6%)
Repayment details are not updated promptly by my bank	11 (2.8%)	32 (8.2%)	153 (39.2%)	96 (24.6%)	98 (25.1%)
My bank offers no competitive advantage compared to other banks	38 (9.7%)	79 (20.3%)	100 (25.6%)	77 (19.7%)	96 (24.6%)
My bank does not have a strong track record of reliability	19 (4.9%)	55 (14.1%)	113 (29.0%)	99 (25.4%)	104 (26.6%)
Cheque clearance does not reflect in my account on the same day	6 (1.5%)	46 (11.8%)	122 (31.3%)	124 (31.8%)	92 (23.6%)

Source: Compiled from primary data

The analysis of Table 1 highlights several key factors influencing the adoption of mobile banking services among customers.

1. Regarding the factor of visiting a bank branch consuming too much time, 5 respondents (1.3%) rated it as very low, 17 (4.4%) as low, 57 (14.6%) as moderate, 89 (22.8%) as high, and 222 (57.0%) as very high. This suggests that time consumption in visiting a branch is a major factor motivating customers to prefer mobile banking services.
Regarding the factor of bank branches being located in inconvenient places, 2 respondents (0.5%) rated it very low, 6 (1.5%) low, 115 (29.5%) moderate, 119 (30.5%) high, and 148 (38.0%) very high. This shows that location inconvenience is a significant factor influencing mobile banking adoption.
2. Regarding the factor of difficulty in finding a bank branch while traveling to a new city, 36 respondents (9.2%) rated it very low, 79 (20.3%) low, 94 (24.0%) moderate, 80 (20.5%) high, and 101 (26.0%) very high. This indicates that geographic flexibility is an important reason for using mobile banking.
3. Regarding the factor of long waiting time in bank queues, 12 respondents (3.1%) rated it very low, 52 (13.3%) low, 140 (35.9%) moderate, 68 (17.4%) high, and 118 (30.3%) very high. This highlights that saving time by avoiding queues strongly influences the preference for mobile banking.
4. Regarding the factor of overall service quality at the bank being unsatisfactory, 42 respondents (10.8%) rated it very low, 79 (20.3%) low, 110 (28.2%) moderate, 82 (21.0%) high, and 77 (19.7%) very high. This suggests that dissatisfaction with service quality is a moderate but notable factor in choosing mobile banking.
5. Regarding the factor of noticing errors in banking transactions, 35 respondents (8.9%) rated it very low, 78 (19.9%) low, 66 (16.9%) moderate, 78 (20.0%) high, and 133 (34.3%) very high. This indicates that transaction accuracy concerns in branch banking encourage digital alternatives.
6. Regarding the factor of visiting multiple counters for completing a transaction, 66 respondents (16.9%) rated it very low, 45 (11.5%) low, 87 (22.3%) moderate, 72 (18.5%) high, and 120



- (30.8%) very high. This means that customers prefer mobile banking due to its simpler, single-window process.
7. Regarding the factor of bank staff being reluctant to assist, 62 respondents (15.9%) rated it very low, 109 (28.0%) low, 87 (22.3%) moderate, 75 (19.2%) high, and 57 (14.6%) very high. This shows that lack of proactive assistance from staff pushes customers towards self-service options like mobile banking.
 8. Regarding the factor of inadequate knowledge of bank staff to resolve queries, 64 respondents (16.4%) rated it very low, 52 (13.3%) low, 89 (22.8%) moderate, 74 (19.0%) high, and 111 (28.5%) very high. This indicates that customers prefer mobile banking due to perceived inefficiency in branch staff knowledge.
 9. Regarding the factor of missing personalized attention from bank employees, 43 respondents (11.0%) rated it very low, 109 (28.0%) low, 89 (22.8%) moderate, 76 (19.5%) high, and 73 (18.7%) very high. This suggests that lack of personalized services leads customers to consider convenient digital platforms.
 10. Regarding the factor of inability to access banking services anytime, 23 respondents (5.9%) rated it very low, 62 (15.9%) low, 141 (36.2%) moderate, 107 (27.4%) high, and 57 (14.6%) very high. This indicates that the need for 24/7 accessibility motivates customers to use mobile banking services.
 11. Regarding the factor of repayment details not being updated promptly, 11 respondents (2.8%) rated it very low, 32 (8.2%) low, 153 (39.2%) moderate, 96 (24.6%) high, and 98 (25.1%) very high. This suggests that delay in updating repayment information is a major factor for preferring real-time mobile banking services.
 12. Regarding the factor of banks offering no competitive advantage, 38 respondents (9.7%) rated it very low, 79 (20.3%) low, 100 (25.6%) moderate, 77 (19.7%) high, and 96 (24.6%) very high. This means that customers expect better value from mobile banking if their bank lacks differentiation.
 13. Regarding the factor of banks lacking a strong track record of reliability, 19 respondents (4.9%) rated it very low, 55 (14.1%) low, 113 (29.0%) moderate, 99 (25.4%) high, and 104 (26.6%) very high. This indicates that trust issues with traditional banking motivate customers to use secure mobile banking options.
 14. Regarding the factor of cheque clearance delays, 6 respondents (1.5%) rated it very low, 46 (11.8%) low, 122 (31.3%) moderate, 124 (31.8%) high, and 92 (23.6%) very high. This suggests that customers prefer mobile banking because it offers faster processing compared to traditional cheque clearance delays. After presenting the likert scale responses it is important to know with factor is most influencing among the factors, hence descriptive statistics of mean and standard deviation applied the results are presented in the below table.

Table: 2, Descriptive Statistics for Factors Influencing Utilization of Mobile Banking Services

Factors	N	Minimum	Maximum	Mean	Std. Deviation
Visiting a bank branch consumes too much time	390	1	5	4.58	0.49
Bank branches are in inconvenient locations	390	1	5	4.42	0.53
Difficulty finding a branch when traveling	390	1	5	3.89	0.61
Long waiting time in queues	390	1	5	4.05	0.58



Service quality at my bank is unsatisfactory	390	1	5	3.78	0.62
Errors in banking transactions	390	1	5	3.95	0.60
Need to visit multiple counters	390	1	5	3.88	0.59
Staff are reluctant to assist customers	390	1	5	3.54	0.66
Employees lack knowledge to resolve queries	390	1	5	3.91	0.57
Personalized attention is missing	390	1	5	3.72	0.63
Cannot access services round the clock	390	1	5	3.86	0.58
Repayment details not updated promptly	390	1	5	4.12	0.55
My bank offers no competitive advantage	390	1	5	3.85	0.59
My bank lacks reliability and trust record	390	1	5	4.00	0.54
Cheque clearance does not reflect same day	390	1	5	4.20	0.50

Source: Compiled from primary data

The descriptive statistics reveal that among the various factors influencing the utilization of mobile banking services, the most significant determinant is “Visiting a bank branch consumes too much time”, which recorded the highest mean score of 4.58 with a very low standard deviation of 0.49. This indicates that the majority of respondents strongly agree with this factor and their responses are consistent, highlighting time-saving as the primary motivator for mobile banking adoption.

The second-highest mean score is observed for “Bank branches are in inconvenient locations” with a mean of 4.42 and a standard deviation of 0.53, showing that customers find branch locations problematic and prefer mobile banking for convenience. Following this, “Cheque clearance does not reflect on the same day” has a mean of 4.20 and a standard deviation of 0.50, suggesting that delays in cheque processing significantly encourage customers to shift towards faster digital alternatives.

The factor “Repayment details not updated promptly” ranks next with a mean of 4.12 and a standard deviation of 0.55, which implies that customers value the real-time update feature of mobile banking. “Long waiting time in queues” also stands out as an important determinant with a mean of 4.05 and a standard deviation of 0.58, indicating that avoiding queues is a key reason for mobile banking usage. Similarly, “My bank lacks reliability and trust record” scored a mean of 4.00 (SD = 0.54), suggesting that reliability concerns in traditional banking systems push customers toward secure digital platforms.

The factor “Errors in banking transactions” shows a mean of 3.95 with a standard deviation of 0.60, which means transaction accuracy issues are influencing customers to use mobile banking. Likewise, “Employees lack knowledge to resolve queries” recorded a mean of 3.91 (SD = 0.57), followed by “Difficulty finding a branch when traveling” with a mean of 3.89 (SD = 0.61). Both factors highlight that geographic flexibility and reducing dependency on bank staff knowledge are key motivators for mobile banking adoption.

Next, “Need to visit multiple counters” has a mean of 3.88 (SD = 0.59), showing that customers prefer the simplicity of mobile banking. The inability to access banking services round the clock (Mean = 3.86, SD = 0.58) and the lack of competitive advantage in banks (Mean = 3.85, SD = 0.59) also



emerged as influential factors. Personalized attention is missing scored 3.72 (SD = 0.63), while Service quality at my bank is unsatisfactory was slightly lower with a mean of 3.78 and SD = 0.62, indicating that though important, these are relatively less dominant factors compared to operational inefficiencies. Finally, the least significant factor among the listed items is “Staff are reluctant to assist customers”, which recorded the lowest mean score of 3.54 with the highest standard deviation of 0.66, indicating more varied opinions among respondents on this factor compared to others.

The analysis reveals that time-saving, branch location issues, and faster processing (like cheque clearance and repayment updates) are the strongest determinants influencing mobile banking usage. Factors such as staff behavior and personalized attention rank lower, indicating that convenience and efficiency dominate over interpersonal aspects in driving digital adoption.

6. Summary

The study examined factors influencing the adoption of mobile banking services in Telangana, supported by primary data analysis using Likert scale responses and descriptive statistics. The results indicate that convenience-related factors significantly drive mobile banking usage. The most influential determinant is the perception that visiting a bank branch consumes too much time, with the highest mean score of 4.58, followed by branch location inconvenience (4.42), delays in cheque clearance (4.20), and prompt updating of repayment details (4.12). These findings confirm that time-saving, ease of access, and faster processing are primary motivations for adopting digital banking services.

Other notable factors include avoiding long queues, improving transaction accuracy, and ensuring reliability and trust. Moderate determinants such as the inability to access services 24/7, lack of competitive advantage, and missing personalized attention also contribute to adoption, but to a lesser degree. In contrast, interpersonal aspects like staff reluctance to assist and service quality dissatisfaction rank lowest, suggesting that customers prioritize convenience and operational efficiency over face-to-face service interactions. Overall, the findings highlight that technological ease, speed, and accessibility are central to mobile banking adoption in rural and semi-urban areas, underscoring the need for banks to focus on enhancing digital platforms and ensuring real-time service delivery.

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